

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

ORANGE JUDD, A.M., }
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November.

"In thin dry mist that morn the sun rose broad and red;
At first a rayless disk of fire, it brightened as it sped.
Yet even its noontide glory fell chastened and subdued
On corn fields and on orchards and softly pictured wood.
And all that quiet afternoon, slow sloping to the night,
It wove with golden shuttle the haze with yellow light.
Slanting through the painted beeches, it glorified the hill,
And beneath it pond and meadow lay brighter, greener,
still."
WHITTIER'S HUSKERS.

No sooner has the first frost fallen, though it be on the first day of Autumn, than people begin to talk of the Indian Summer, as if that period were as well settled and as easily discerned as the regular seasons. Having recently consulted the clerk of the weather, we propose to post our readers upon this most charming period of the year. Whittier with a true poetic instinct has given us a complete picture of one of these Indian Summer days. We see the seeming mist which is no mist at all, for the morning is as dry as a July morning in drouth. A soft haze hangs over field and forest, subduing the radiance of the sun, even at midday. It is this unusual diminished light that throws such a

charm over the landscape. The clear outline of objects, so noticeable in a brilliant Summer day, is no longer visible, and the imagination is called into play, to fill up the defective vision. The islands that lie slumbering on the distant sea, or lake, are elevated, and so seem to have come nearer to us, as if they had changed their places in the night. The trees look taller, and the hills grow higher, the rocks are magnified, and the distant plain has a wider expanse. The deep luxuriant green of Summer has gone, but the landscape looks far more beautiful than in its richest dress. We have the "dim religious light" under the open sky, and every object seems glorified. The feelings very naturally take the hue of surrounding objects, and we look forth upon nature with a sober quiet enjoyment, a perfect contrast to the rapture with which we hail the bright skies, and the opening flowers of Spring.

Every one must be conscious at this season, of the stirring of some more powerful principle within him than mere animal life. The spiritual nature is quickened, and there is a longing after something higher and better than earth can give. The stillness that reigns every where, the sober hues of the landscape, the falling leaves, and the bare fields, are powerful aids to reflection, and the mind, released from the pressing cares of Summer, now falls into genial musing. This is one reason, probably, why these days are so enjoyable. Faculties that with multitudes are partially suspended under the pressure of business, are now called into the highest activity.

These Indian Summer days are too beautiful to come all together, or to last long. They begin earliest at the far north, and follow the retiring Summer to the far South. The best authorities put them immediately after Squaw Winter, which is the first cold snap that destroys tender vegetation. This is often accompanied by flurries of snow and the freezing of the ground as if the real Winter had commenced. This rarely comes before October even in New-England. The true Indian Summer then begins, and according to the calendar we must have twelve of these days before the real Winter commences. We have the most of them in November, rarely, however, coming more than one day at a time at this late season.

They are found in greatest perfection along the Atlantic coast, where the influence of the Gulf stream is felt. A breeze from the South or Southwest brings the atmosphere of the tropics, and the most enjoyable weather of the year. When the Governor guesses right, and Thanksgiving week falls upon Indian Summer, the cup of blessing runs over, and there is nothing more to be desired. The old homestead is certain then to be crowded, and the last grandchild to be brought to the family gathering. The warm sunshine of the heart finds its fitting

response in the outer world, and the chill blood of age is quickened with a Summer glow again. Old age, surrounded with children and children's children, is much like the Indian Summer. It lies between the active duties of life and the Winter, which we call Death, but which is really no Winter but Spring time, if life have been well spent. It is sober but genial, all the activities are subdued, the passions softened, making it the ripest, best period of Summer life.

This is the month in which we usually pay our respects to "the old folks at home," and as we have talked abundantly of planting and hoeing, haying and harvesting, for the edification of our young and middle aged friends, we propose now to say a word for that less numerous, but not less honored class, who only read these pages through the aid of glasses. It is said, with how much of truth we can not tell, that the custom of returning to the old homestead to keep the only festival in the Puritan year, is not so generally observed as in the last generation, before the advent of steamers and railroads, which would seem to make the trip much more safe and pleasant. It is certainly true that the day is more widely observed, nearly all the States taking public notice of it, the churches gathering for worship, and families doing ample justice to the roast turkey and the chicken pie. But the charge is, that the son, who left the farm early in life, and who has been prospered in the city, finds it more agreeable to spend the day around his own mahogany, and inside his own marble front, than to make a pilgrimage to the humble dwelling that sheltered his childhood and there keep the feast in plainer style with father and mother. He has lost his relish, not only for country life, but for the simple manners and frugal fare of the good old people that gave him being, nourished his helpless infancy, and trained him to habits of virtue and industry. He has forgotten the plain granite rock whence he was hewn, and affects marble. This may be putting the case rather strong, for business cares rather than pride, we would gladly believe, wean sons and daughters from the old homestead. But it is paying too high a price for worldly success, however great, when it blunts filial affection, and weans us from the assiduities that are always due to parents.

The annual pilgrimage at any reasonable sacrifice, will make better sons and daughters, and give happiness that gold can not purchase. The old folks are often lonely at the eventide of life, having sent out all their children to new and distant homes. This year, the war has taken the last son from some of these homes, and the Benjamin of the family on whom they had leaned for support will spend this festival in the tented field. Those who can, should go to cheer these bereaved hearts, now saddened by a double grief, their country's and their own.

Calendar of Operations for Nov., 1861.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable further North and South, by allowing for latitude. —The calendar will, of course, be much more full during the season of active field and garden work.]

Explanations.—*f*, indicates the first; *m*, the middle; and *l*, the last of the month.—Doubling the letters (*ff*, or *mm*, or *ll*) gives particular emphasis to the period indicated.—Two letters placed together, as *fm*, or *ml*, signify that the work may be done in either, or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the first to the middle of the month.]

Farm.

The shortening days and intervals of severe weather betoken the approach of Winter, and every thing should be in readiness for its coming. Any root or other crop unharvested needs the first attention. Threshing and marketing grain will profitably occupy the time of many. Permanent improvements in building, fencing, draining, etc., can be made most favorably at this season.

Buildings should be thoroughly examined, and put in repair. Clear out and fit stables and sheds for the early accommodation of stock.

Cattle—Confine in the stables at night, and feed liberally; and with a variety of food. Use the straw cutter—it is a good economizer of fodder; cook roots.

Cellars—Keep well ventilated where roots are stored, and guard against rats. Use straw, leaves, muck, or soil rather than stable manure for banking up outside.

Cisterns and Wells—See that all fixtures are in order to convey water, and guard against freezing of pipes.

Corn—Complete husking, *ff*, if not done, or as soon as practicable; the weather and vermin injure that left in the field. The stalks should be saved from the beating and rotting of storms. Store the ears in well ventilated cribs. Select the best ears for seed; if neglected until now.

Draining—Continue to make drains as needed, while the weather permits. Clear out open ditches and road sluice ways, and occasionally examine drain furrows in grain fields. Standing water kills grain roots.

Fruit—Keep in a cool place, but guard against freezing. Sort over before removing to winter quarters.

Grain—Thresh early, and market or store securely. Select the best for seed. "Like produces like."

Hedges—Plant deciduous, *ff*, *m*, if the soil be dry; otherwise leave until Spring. Leave evergreens till May.

Hogs—Keep up their appetite by change of food, and fatten as rapidly as possible. Cold weather consumes fat. For early pigs turn a male among the breeders, *m*, *ll*.

Horses—Feed with unthreshed oats run through the cutter, with hay and carrots, alternating occasionally. Keep stables well ventilated, and keep the skin clean and active with curry comb and brush.

Ice Houses—Prepare for filling early. There may be but one crop of good ice.

Manure—Collect plenty of leaves from the woods and muck from the swamps, to use for bedding and compost. Allow no accumulation of heaps near stable doors. Keep all under cover in sheds, and compost with muck, etc., as fast as collected. Plenty of manure—good crops.

Plow heavy lands intended for corn in Spring, and leave it unharrowed, to ameliorate the soil and destroy insects.

Poultry—Complete fattening early. Keep the store hens in warm quarters, feed well, give them a little fresh meat occasionally, with plenty of gravel, ashes, and lime or pounded oyster shells.

Pumpkins—Feed to cattle, first removing the seeds. Keep secure from frost. A dry loft, with any needed covering of straw, is better than a dry cellar.

Roots—Harvest any remaining, *ff*. See page 334.

Sheep—Take them from the pastures early, and provide ample sheds, well ventilated, for protection from storms. Feed in racks apart from other stock. Allow free access to water, and salt weekly. For early lambs turn in the buck, *m*, *l*.

Straw used for feeding, should be cut and mixed with meal or shorts. Use freely for litter.

Sorghum—Complete cutting and manufacturing, *ff*. Keep under cover until used. Moderate freezing does not spoil it for syrup, if not allowed to heat.

Tools—Keep all in their place under cover. Repair and paint as needed. Coat steel and iron surfaces with hard and a little rosin melted together, to keep them from rust. Clean and oil harness, and put the sleighs in running order.

Winter Grain—Keep the drain furrows open; allow no water to stand on any part of the surface.

Wood—Collect all fallen branches, clear up under brush, fell decaying trees, and have a full supply ready to draw when snow comes.

Orchard and Nursery.

Fall planting is now in order, and many good practical tree growers strongly advocate setting out trees in Autumn. If the ground is measurably dry, we advise to plant hardy trees after the first hard frost in the Fall, but leave the evergreens and tender fruit trees, including most of the stone fruits, until Spring. See articles upon this subject in October *Agriculturist*. To guard against mice, it is well to make a hillock of earth about newly planted trees, especially near stone walls, and other places affording a shelter for the field mouse. These mounds also serve to keep the trees from being swayed about by high winds, but they should be leveled in Spring.

In addition to the regular orchard, see if there is not room for a few fruit trees about the buildings, along the lanes or highway, where they will be both ornamental, and afford a pleasing shade in Summer. We commend the taste of ornamenting small places with different varieties of fruit trees, some of which have beauty of form, and foliage, not excelled by many of the prized foreigners.

If the cider making is not completed, finish early in November, before the apples decay. Better feed soiled and wormy apples. Worm juice or oil may add to the smooth flavor of cider, but not to its agreeableness. It don't "work off through the bung hole." We once counted over 2,300 worms in the apples that were made into a single barrel of cider.

This is the best time to collect grafts or scions for next Spring. Cut from bearing proved trees as much as possible, tie in bundles, mark with a painted wooden label, and bury in dry soil in the garden, or pack in boxes of earth in the cellar.

Some of the late fruit may still remain ungathered. Secure it, *ff*, and keep all Winter fruit out of the cellar as long as possible. A cool, dry shed or barn will serve a good purpose. When finally removed to the cellar through fear of actual freezing, keep the windows open, until severe weather necessitates closing them, and in a cool, dry atmosphere the fruit will keep a long time. Sort over carefully when put in, removing any decayed and bruised fruit. Pears will ripen best when laid on shelves in woolen blankets. Bring them from the cellar, as wanted, and ripen them in a warm room. See page 337.

Seeds of apples, pears, quinces, plums, cherries, peaches, and the various nuts and hard-shelled seeds—plant *ff*, *m*, if not already done as directed last month. Other nursery work will require attention, such as a final plowing between the rows, turning the furrows towards the trees, leaving open drains for the water to run off, etc.

Let all the hardy stocks from the seed beds be set this Fall, while there is leisure to do the work well. Manure the soil heavily, plow and subsoil or trench thoroughly, and set the stocks by a line stretched along as a guide. The more tender seedlings may be taken up and set in sand in a shed cellar, or be covered with leaves and evergreen brush in the seed bed.

Some of the half-hardy shrubs and vines will need protection during the Winter. If they will admit of the process, bend them down, and cover with earth, but if too rigid to lay down, cover with straw, old mats, or boughs of evergreens set up about them.

Kitchen and Fruit Garden.

Now that the crops of vegetables and fruits are secured, do not leave the garden in an untidy condition. Gather and burn all weeds and rubbish which can not be made serviceable in the manure heap. Weeds which have ripened seeds are not fit for manure; if taken there, the seeds would be propagated next season.

Asparagus beds may still be made, *ff*. Cover the old beds, *m*, *ll*, three inches deep with horse manure, to be forked in next Spring.

Beets—Gather, *ff*, before injured by frost. Twist off tops and feed to cattle or pigs. Store in a cool dry cellar.

Blackberries—Set out, *ff*, if not already done.

Cabbages and Cauliflowers—Harvest the late crop and store for Winter in the cellar, or cover with earth. See page 296, Oct. Number. Set young plants in cold frames.

Carrots—Dig and store remaining crops, *ff*.

Celery—Earth up, *ff*, in dry weather. Store for Winter, *m*, *l*. Set it upright in barrels, or on the cellar bottom, or even out of doors, and cover with sand. Keep the leaves together that no earth may fall between the stalks.

Cold Frames—Set in, *ff*, *m*, cabbage, cauliflower, lettuce, etc., for Winter protection. Cover with glass or shutters at night, removing them in the day time until cold weather. Destroy mice that may enter, with poison-

ed meal. As the cold increases, bank up about the sides and put straw over the covers.

Currants and Gooseberries—Transplant, *ff*, *m*. Protect the roots with a coating of manure.

Dwarf Pears—Give a top dressing of old manure, and make a mound of earth six inches high around the trunks to protect the bark from mice.

Drain and trench clayey soils; it will make them fit to work earlier next Spring, and improve the soil.

Grape Vines—Plant roots and layers, *ff*, *m*. Prune as needed, and preserve cuttings in sand for next year's planting. Take vines from trellis, *m*, and protect with straw or earth. Read article on page 338.

Onions—Cover any to be left in the ground with straw.

Parsneps and Salsafy—Dig, *m*, *l*, what is wanted for Winter use, and bury in sand in the cellar. Both are improved by being left in the open ground through Winter.

Plow or spade up all unoccupied ground and leave it in ridges to be mellowed by frost.

Poles, stakes, frames, etc.—Gather and house.

Raspberries—Transplant, *ff*, if not completed. Bend down and cover tender sorts with an inch of earth.

Roots—Complete harvesting before injured by frost. For directions about storing see pages 334, 339.

Rhubarb—Set roots and crowns, *ff*. Cover with coarse stable manure for protection.

Spinach—Hoe and thin the plants, and cover with straw.

Strawberry Beds—Protect with a light covering of straw: an inch deep is sufficient. Hardy varieties will yield the better for it.

Flower Garden and Lawn.

The Chrysanthemums are now nearly alone in their glory. The dahlia and gladiolus linger in some localities, but they have generally been cut down by frost, and should now be lifted and put away for winter. Pack them in dry earth, and set in a dry place in the cellar. Any bedding or other plants, intended for the house or cellar, should be taken up, *ff*, *m*, and put into winter quarters.

If the bulbs have not been planted, lose no time in getting them in, as directed last month. They are usually left too late to bloom freely the next Spring, and in many cases are entirely neglected—Autumn not being the usual planting season. They come into bloom so early in the Spring, and are such universal favorites, that we urge a liberal planting of hyacinths, tulips, crown imperials, fritillarias, crocuses, etc.

Most Climbers, such as the wistaria, ivy, honeysuckle, climbing rose, etc., come out fresher in Spring, if now taken from trellises and laid upon the ground. A slight covering of earth, straw, or leaves, will still further protect them. Tender roses and other yielding shrubs are best protected by bending over and covering with earth. Those too rigid to admit this, may be bound up in straw or have evergreen boughs set around, and firmly bound to them. A light protection, little more than a shade from the sun, will be of great service to tender shrubs.

Shade trees and shrubs may be set with advantage early this month, the more so, as there is plenty of time to do the work well. If the place is new, and the lawn not yet arranged, Autumn is a good time to perform the heavy grading, filling in, terracing, laying out walks, etc. Established lawns should be cleared of falling leaves rubbish, etc., and be rolled previous to hard freezing, unless the ground be dry, and the turf firm.

Hedges may still be planted on dry soil, *ff*. If they require what is called the Winter pruning, that is, cutting away from the bottom and sides to increase the height, it is better to do it now. In few cases, however, will this be needful, as the bottom should be kept close and thick.

Perennial flowering plants will give a finer bloom another season, if transplanted now rather than in Spring. Divide the roots of such as are to be increased in number. Peonies, lilies, and a few other plants will flower feebly, if set in Spring.

Complete all the Winter arrangements early in the month, attending to the pits as needed. Have every thing secure for hard frosts, which are soon to be expected, where they are not already upon us.

Green and Hot-Houses.

There will necessarily be much activity in this department now, especially where fire heat is used. The remaining half hardy plants should be taken in and arranged early this month; those intended merely for wintering, require only to be placed beyond the reach of frost in the green houses. Plants for propagation or for winter flowering, must go into the forcing departments. Having put every thing in its appropriate place, one of the first

things should be to provide an abundant supply of potting soil to be used during winter. It is always advisable to use at least a portion of fresh earth whenever a repotting is necessary. The old soil may be incorporated with the heap, and used again after some months exposure to air, but it should be well mixed with fresh, rich compost.

Provide early for a good and constant succession of winter bloom for the conservatory, parlor window, or hot-house. Unless already attended to, set out a large quantity of bulbs, hyacinths, tulips, crocuses, etc., in pots of various sizes and shapes—hedge-hog, bee-hive and column form—and in glasses to be placed in the green house or other cool place at first, and afterward taken to warmer quarters for flowering. By a judicious arrangement, a constant bloom of these fine odorous flowers may be kept up during the whole winter.

Many of the flowering shrubs, such as double flowering almond, plum, azalea, deutzia, spirea, etc., flower finely in the hot-house, and are attractive objects when formed to dwarf by frequent pinching, with compact and well rounded heads. They alternate finely in small collections of camellias, roses, ericas, fuchsias, hydrangeas, and other shrubby plants of the green house proper. A good assortment of annual flowering plants should also be sown at once if not already put in. The bedding verbenas, petunias, lantanas, salvias, etc., which have given such pleasure in the open ground during the entire season, should receive due attention inside, where they may be equally attractive if well potted and properly disposed of.

Care should be exercised in the heating apartments, especially among collections recently growing in open grounds. A high temperature would suddenly throw them into a weak, sickly growth, which should by all means be avoided. Except among collections accustomed to a high temperature, 60° of warmth is sufficient until the plants have become well established. The temperature should also be kept as even as possible. A good thermometer is indispensable for a guide. In clear, warm weather, the doors or ventilators may be kept open for several hours during the day.

Water should be kept in open tanks in the houses, that it may always be of the proper temperature for use. Use sparingly during the first stages of growth, but syringe the walls and foliage occasionally, to preserve a humid atmosphere and dislodge insects.

Prune and lay down, or tie up grape vines which have ripened their wood. Give them a season of rest now. If the roots are in an outside border, cover them with manure, straw, etc.

Use every precaution to prevent insects from forming a lodgment in the houses. It is much easier to keep them out, than to destroy them after they are once established.

Apiary in November.

Prepared by M. Quinby—by request

The directions given last month in this department, were so full, that little more need be added now. Bees are usually very quiet this month. If a proper selection of stocks for Winter has been made, all persevering attempts at robbing are given up; whenever there is pleasant weather, and they fly out, it is simply for exercise, instead of plunder.

There is little to be done now, unless something has been neglected. Any empty honey boxes not put away, should be brushed up, and put in order for another season. Entrances to all the hives should be contracted to exclude the mice. If it is desired to paint hives that contain bees, this month is the best time to do it. New hives for another year should, if possible, be made and painted now—the longer paint is applied before using, the better. It is not usually best to put them into their winter quarters before December, as they need to fly out during any fair days, before their long winter confinement.

Our Maps of the Seat of War.—On pages 345, 348, and 349, we print three new maps, which show all the leading points of interest during the present war, so far as developed up to this date (Oct. 18.) As the contest goes on, other obscure localities may become famous—as much so, perhaps, as the previously unheard of rivulet, called "Bull Run." The scale of miles on each map will generally enable the reader to locate any new points by measuring with rule or divider its distance from some leading town already on the map. The paper is sized to bear writing ink, and a convenient plan is to mark down with a pen the ascertained location of any places of new interest, and also to draw a small circle around such points as have become noted by recent events. Red ink will make the spots still more conspicuous. Our younger readers will find it profitable to study Geography daily in these times, as localities studied out in connection with the occurrences now transpiring, will never be forgotten. A large Naval Expedition has just gone to sea, and probably one of the "seats of war" will be at some point on the Southern Coast. Not knowing where it will be, we can not furnish a map in advance.



Containing a great variety of items, including many good hints and suggestions which we give in small type and condensed form for want of space elsewhere.

Remarkable Weather.—Here we are, past the middle of October, and not a touch of frost has been felt. The tenderest vegetables are yet as green as in midsummer. The Lima Beans are in full vigor, ripening off their third, fourth or fifth crop of ripe pods. The pastures yet afford fine forage for the cattle; while the most laggard corn seems to have all the days of grace it could ask. This weather will count millions of dollars in the yield of the cornfields and dairies of our country.

P.S.—A letter from N. B. Safford, dated Oct. 16, White River Junction, Vermont, (latitude 43½°) says: "It is now October 16, and no frost yet in this part of Vermont. In my garden, the squash, cucumber, and tomato vines are in blossom and growing finely. Beans are up four inches, grown from beans ripened and dropped this season—and so of tomato plants. Such weather, before this season, is out of the recollection of the 'oldest inhabitant.'"

How fared the Strawberry Plants?

—We have this Autumn sent out by mail thousands of premium Strawberry plants to all parts of the country, putting them up in oiled silk or muslin, and covering them as closely as the Post Office Department here would allow. We have heard several good reports of them, and but few failures. Not only for our own credit, but as matter of general information, in regard to the feasibility of this mode of sending plants, we shall be glad to hear from many others. A line or two, added to any subscription letter or other communication forwarded to this office, will be all that is needed.

Blackberries—Distance for Planting.

—Buel D. Overton, Suffolk Co., L. I. The best plots of the New Rochelle Blackberries, we have seen, were 6 feet apart. They were kept in the rows, which they filled up like a hedge. Except on extra good soil 4 feet apart in the rows would be preferable to 8 feet. On poor soil 4 feet apart, in 6 feet rows, would give room enough for a few years. They may be planted in early Spring, but we prefer Autumn, as the roots then get well established earlier in Spring, and suffer less from drouth the first season.

Berries in October.

—It may be well to put on record, that we have this 16th day of October, 1861, picked from the open garden, the largest New Rochelle Blackberries of this season, 3½ inches in circumference; also fine Belle de Fontenay Raspberries, and plenty of the Catawissa; also a few fine Jenny Lind strawberries, from vines having blossoms for more. This will do for October.

Asparagus Beds in Winter.

—"Oddwell." In November cut down the old stalks and burn them, spreading the ashes on the bed, or, better, put the stalks in the compost heap. Cover the bed with 3 to 4 inches of well rotted manure, digging most of it into the soil.

Protecting Grape Vines.

—W. A. Fraker, Huntingdon Co., Pa. The cuttings of hardy grape vines, planted last Spring, may remain unprotected till next Spring, and then be set in the vineyard.

A City Mechanic's Grape Vine.

—W. B. Westcott has in his yard, in Madison-street, in this City, an ordinary Catawba grape vine, 8 years old, which yielded over 300 lbs. of fine fruit this season. At 10c. per lb.—a low price for such fine clusters as he exhibited at the *Agriculturist* office—they are worth \$20. This is not bad for a vine which is only one of several on a lot 20 by 100 feet, house and outbuildings included. The cost is next to nothing; the pleasure is not to be reckoned in dollars and cents. This is one of ten thousand illustrations of what may be done, even on the limited city house-lots. Mr. Westcott has been a long time a subscriber to this journal, and we are pleased to know from himself, that he finds it a valuable and pleasing visitor.

Japan Lily and Tuberose.

—Mrs. G. S. Anoble, Herkimer Co., N. Y. The Japan Lily need not be taken in during the Winter. A few inches covering of stable litter is sufficient. The Tuberose is more tender, and requires lifting and drying before winter sets in. Keep in boxes of sand, in a cool, dry place, same as dahlias, and plant out in May.

Fowler's Steam Plow.—This apparatus which has attracted much attention in England, and is there coming into extensive use, is about being introduced into this country. Mr. R. W. Edlison, an agent of Mr. Fowler, has recently brought over one of the plows, and it is now on exhibition near Philadelphia, where it is to be thoroughly tested. It will be remembered that the first premium of £100 was awarded to the Fowler plow, in a recent trial at Leeds, England, and also £75 out of £100 which had been offered for the best plow worked by an ordinary portable engine. The remaining £25 was given to Mr. Howard, instead of £75, as was stated in the September *Agriculturist*. See advertisement in this paper.

A fine Engraving.—We have received from the publisher, Mr. J. Lewis, of this city, a beautiful steel plate engraving of very large size, representing the "Last Supper." It is copied from Leonardo da Vinci's great painting, the finest picture of the subject ever made. The price has been reduced from \$10 to \$2 which places it within the reach of the masses.

The World's Fair in 1869.—The Commissioners named by Congress to represent the interests of Americans at the World's Fair to be held in London next year, have appointed an Executive Committee, consisting of B. P. Johnson of Albany, N. Y., Chairman, James R. Partridge of Maryland, Secretary, and Henry Kennedy and Mr. Seaton of Washington. It is their duty to make all necessary preparations for the exhibition of American contributions. An office is to be established at Washington, and a description of all articles intended for exhibition is to be submitted to the Committee for examination. Communications on the subject may be addressed to either of the above named gentlemen.

The Westchester Co. (N. Y.) Fair, was more successful this year than usual. The presence of a large number of Fire Companies added to the attractions and to the receipts. The display of animals and implements, and of farm, garden and household productions was good, but not quite up to the ability of so populous and flourishing a County. There are abundant facilities in this County to sustain one of the largest agricultural and horticultural societies in the country.

Queen's County Fair.—Notwithstanding the war excitement, and the necessity of changing the day on account of the national fast, the Queen's County Fair, on Thursday, Oct. 3, was the most successful one ever held by this old and enterprising Society. The general display of agricultural, horticultural, and household products was unusually large. The attendance reached fully 12,000 persons, though the grounds were open but a single day. It is believed by many of the Society that the old custom of a one-day show should be varied. The trouble and expense of getting up the display are little more for two or three days than for one day, while the attendance and receipts would be likely to be much larger. There is much to be said on both sides of this question.

Glen Cove Farmers' Club, L. I.

—From what we hear of the doings of this Club, and see of the results of their labors, we conclude it is one of the most spirited associations of the kind in the country. At the recent exhibition of the Queen's County Agricultural Society, we noticed a wide table, 35 to 40 feet in length, entirely covered with prodigious vegetable products, contributed by the members of this Club alone, besides numerous specimens of fruits, etc., on other tables. Nothing but absolute want of time shall prevent our dropping into one of their meetings the coming Winter.

Canadensis P. O.

—Will some resident subscriber gratify our curiosity by telling why this Office or town was so named? In the Latin tongue, Canadensis is the Genitive (possessive) Case of the word Canada, but we can imagine no reason why a town in Monroe Co., Pa., should be so named, unless it be that "Canada thistles" do much about there. No imputation upon our old College friend who "farms it" there; he uses clean (composted) manure, and of course sows only clean seed, and doubtless keeps his land clean. —P. S. A friend at our elbow suggests that tan-bark has something to do with the name—the botanical name of hemlock being *Abies Canadensis*.

Good for Illinois.

—W. H. Russell, L. L. D. who represents the London Times in America, and misrepresents America in the London Times, went out shooting in Illinois on a recent Sabbath. Sunday shooting being against the laws of that State, Mr. Russell was taken before a magistrate and fined \$30, the fine going to public schools. We are glad to learn that one of his "talents" is likely to be of some good to this country.

To Stimulate the flow of Milk.—A prescription, said to be popular among physicians in Germany, is Hufeland's formula, viz.: 1 drachm fennel seed, $\frac{1}{2}$ drachm dried orange peel, three drachms subcarbonate of magnesia, 2 drachms of white sugar. The whole to be mixed in powder, and a teaspoonful taken three times a day. This is for the human subject, and is said to produce surprising results. **Query.**—Why would not a larger dose affect milch cows favorably? The chief virtue is supposed to lie in the fennel seed; and an experiment with this alone might be tried.

Caked Bag in Cows.—Young Farmer. Boil a large handful of poke or garget root in two gallons of water, and after skimming out the roots, when boiled, use one third of the water in a mess with bran. Three messes will generally relieve the most obstinate cases.

Water for Swine.—"Subscriber," Rockville Center, Ill. Swine should always have free access to pure water, or at any rate it should be furnished to them daily, whatever may be the feed; nothing can supply its place for quenching the thirst of animals.

Feeding Bees in the House.—V. Frank, Jefferson Co., Ky. Bees, when shut in the house and fed, will not often do more than fill the combs they may have empty. They can not be induced to build much comb, without an opportunity to fly out frequently.

Tanning Skins with the Hair.—Geo. W. Goodwin, Litchfield Co., Ct. The following directions, republished from a previous volume of the *American Agriculturist*, have been found good: Stretch the skin tightly and smoothly upon a board, hair side down, and tack it by the edges to its place. Scrape off the loose flesh and fat with a blunt knife, and work in chalk freely, with plenty of hard rubbing. When the chalk begins to powder and fall off, remove the skin from the board, rub in plenty of finely powdered alum, wrap up closely, and keep in a dry place for a few days. By this means it will be made pliable, and will retain the hair.

Rat Killing Recipe.—Dr. Kellerman of N. Y., gives the *Agriculturist* readers his method of expelling rats. "Cut clean fine sponge in pieces of pea size, fry well in hog's lard and expose in infested places about the houses, barns, granaries, gardens, etc., at night, keeping cats and dogs shut up. The rats eat it greedily, but do not as readily digest it, the gastric juice, and especially water, if accessible for them to drink, swells the sponge, and a noise in random is the result. The dose proves fatal in most cases." We have seen the same thing recommended previously, but have never proved it. It may do, and is easily tried.

Onions and Vermin.—D. White, Bergen Co., N. J., in a letter to the *American Agriculturist*, says, it is a well known fact in his section of country, that when lousy cattle are pastured upon land infested with wild onions, the lice speedily disappear, and asks whether feeding onions to lousy cattle will be beneficial. Cultivated onions will probably have the same effect as wild ones, though there is some doubt as to the efficacy of either. It is easily decided by experiment. A better way is, to keep stables free from vermin at the first.

Manure for Fruit Trees.—S. H. We doubt if there is any such thing as "a specific manure" for trees. The best, perhaps, is well rotted manure, or a compost of muck, treated with lime, or with unslaked ashes. Dig out the muck in Fall or Winter, and mix it with ashes at the rate of five bushels of ashes to one wagon load of muck. Let it lie, shoveling the mass together occasionally; it will be fit for use in Spring. This will contain nearly all the elements necessary to healthy growth of fruit trees.

Rostiezer Pear.—R. G. This is a first-rate Summer pear; wood is a dark olive, leaves large, fruit medium size, fair, very juicy, aromatic. Ripens about Sept. 1. Does well on the quince stock for several years, but after that its rampant growth becomes top-heavy.

"Largest Apple Tree in America." Kentucky must try again or yield the palm to Pennsylvania. The Kentucky tree, described on page 260 (Sept. *Agriculturist*), is 15 feet around. Lewis Kohler writes us that on the farm of Peter Kohler, Lehigh County Pa., there is an apple tree which, by actual measurement just made, is 17 $\frac{1}{2}$ feet in circumference, one foot above the ground. At nearly 7 feet high it is 15 $\frac{1}{2}$ feet around. It forks at the height of 7 feet, one branch measuring 11 feet 2 inches, and the other 6 feet 7 inches in circumference. The tree is 54 feet high, and the branches extend 36 feet

each way from the trunk. An old inhabitant, of the age of 93 years, says the tree is over 100 years old. It still bears every other year, the crop last year being about 40 bushels of sweet apples. Can any one excel this?

Planting Trees near Stumps.—"W." of Bergen Co., N. J., inquires whether apple trees will grow when set near the stumps of others which have decayed, or in the places which they occupied. The only objection to the practice is, that the old tree may have impoverished the soil; otherwise we know nothing to make it unsafe. The difficulty can be easily remedied by thorough manuring.

Transplanting Laurel (*Kalmia*).—Mrs. T. Wilson, Winona Co., Minn., writes, that laurel abounds in northwestern Pennsylvania, and she thinks it might well be introduced into Minnesota. In answer to her several inquiries: Small plants may either be transplanted in Autumn, at any time before the ground freezes, or in early Spring. Those growing singly, not shaded by other trees, will bear moving best. Take them up with a ball of native soil, if possible, securing it in contact with the fibrous roots, by binding on canvas or matting, or even common coarse muslin. Several plants may be bound together. Put into any good soil, setting no deeper than they grew originally. With moderate care they can be moved successfully.

Keeping Grapes.—G. M. Usher, Richmond Co., N. Y., gives the following method of keeping grapes, by which he has preserved them until March: Gather them after the first frost, take out the defective berries, and lay them in boxes on cotton, each bunch separate from the others. Several layers may be placed in a box, with cotton between. Then bury the boxes in the ground (Mr. Usher places his in a potato pit.) When a box is opened, the fruit must be used soon, or it will spoil.

An Apple in a small-necked Bottle.—Upon our table is an apple 2 inches in diameter, in a glass bottle with only a $\frac{1}{8}$ inch neck. It was received from Mr. Thorp, of Flushing. The branch was thrust into the bottle soon after flowering, and the apple grew inside. The glass was nearly transparent and admitted light and air enough to perfect the apple. To preserve it from decay we filled the bottle with weak alcohol which has turned the skin dark; otherwise the apple is sound and perfect. We have frequently seen cucumbers thus grown to fill up large bottles.

Seedlings—Interesting Discovery.—In producing new varieties of double pinks, much patience and perseverance have been required. The best growers have been able to secure not more than 20 or 30 double flowering plants from a thousand seedlings. According to the *Journal of the Paris Horticultural Society*, a noted Italian cultivator, Signor Rigamonti, has discovered that on looking over a bed of seedling pinks, those plants which will turn out double will be found to have three leaves in a ring, while all the others will have but two. These three-leaved plants can therefore be selected and cultivated, and all the rest thrown away, which reduces the labor of propagation to one fiftieth or fortieth part of that formerly required. Signor R. found a similar marking of double flowers in the *Primula sinensis*. This discovery, if confirmed, will be of great value to cultivators, and tend to a rapid and economical multiplication of beautiful double varieties of these charming plants, and probably lead to the discovery of similar or other characteristics in other plants.

Flowering Hawthorns.—G. S. There are at least three varieties, the double white, double pink, and single scarlet. All of them are desirable shrubs of the larger size. The double sorts have the appearance of wreaths of miniature roses. The only drawback that we know of, is their liability to become infested with insects.

Chinese Chrysanthemums.—Elsie. Many varieties are in flower about Nov. 1st. Go to any good green-house, and you will find them in a blaze of bloom. They are a very desirable class of plants, easily managed, and blossom for a long time. Some of the best named plants, to our knowledge, are the following, for a dozen: *Laray*, rosy lilac. *La Gitana*, bluish white. *Brunette*, red. *Solfaterre*, yellow. *Mignonette*, orange. *Lais*, purple. *La Fiancee*, white. *Piquillo*, dark crimson or purple. *Louise Meiller*, creamy white, extra form. *Rose Pompon*, rose colored. *Sacramento*, orange yellow. *Grand Sultan*, carmine maroon.

The Best Noisette Rose.—D. K., Vienna. This will depend on circumstances. If you mean for culture in a green-house, we should say one thing; and if in the open air, we should say another. Supposing that

you intend the latter, we should recommend two, instead of one, viz.: *Aimee Vibert*, and *Caroline Marinette*. The first is pure white, blooms all Summer long, even up to hard frosts. The latter is like unto it, only that the petals are slightly suffused with pink. It is flatter, and less cupped than *Vibert*. They are both harder than any others in our collection, going through the Winter very well, if protected with a few inches of soil or litter.

Preserving Grape Cuttings.—"Joha." Cut the canes in convenient lengths, leaving three buds on each; select a dry spot in the garden, take off about one foot of soil, lay in the cuttings and cover them with a foot or more of earth, rounding off the heap firmly, so as to shed rain. In a wet place, the buds would be spoiled. Some persons take them into a cool part of the cellar, and bury them in sand or common earth.

Counterfeiting Apples.—Yankees Outdone.—Hitherto, when it has been desired to express the highest degree of financial acuteness, we have referred to the Yankee who sold wooden nutmegs, or to the one who turned his refuse shoe-pegs to account by sharpening the other end and selling them for oaks; or finally to the seller of "Suffield indigo," i.e. blue colored cakes of starch. But Johnny Bull is now a little ahead. Mr. W. L. Scott, in a recent lecture before the "London Society of Arts," says the fruit dealers in England are selling painted imitations of the American Newtown Pippins; stale oranges are colored up bright and new with saffron; melons and cucumbers, when rusty, are brightened with acetate of copper (verdigris); while they are sending to our country, Cayenne pepper manufactured from old ship bread which is first soaked in a solution of genuine pepper, then dried, and colored if needed, then ground fine with a little lime, and put up in boxes labeled with the royal arms and marked "pure."

Spontaneous Combustion of Manure.—A subscriber inquires if there is any danger of spontaneous combustion in manure and straw under a barn if it be not frequently stirred. We have heard of no such instance. Oily materials with straw might take fire. (See page 259, September *Agriculturist*.) Manure is injured by "fire-fanging" as it is called, that is, if allowed to heat to dryness in a heap.

Manure from Tanneries.—G. E. Palen, Monroe Co., Pa., (whom we remember as an old fellow student in the Yale College Agricultural Laboratory,) writes that he obtains an excellent manure by composting together the refuse from hides and lime from vats, with the spent tan bark. By placing them in alternate layers and allowing the heap to remain a year or two, the whole is reduced to a fine mass for spreading. It has at least one advantage over yard manure, in that it contains no seeds of weeds or noxious plants.—The hide clippings must furnish a very good fertilizer, the good qualities of which are mostly retained by the tan bark, if not subjected to the washing of rains.

Keeping Turnips Fresh.—Take up on or before November 1st. Cut off the leaves about an inch above the roots, carry the latter into the cellar or pit, cover with straw, and then throw on six inches of dirt. These will keep sound until February. After this, Swedish turnips will answer until Spring. They may be pitted in a dry place out of doors, covered with three inches of straw and one foot, or a foot and a half of earth. When opened they will be as sound and nice as when first dug.

Sample of Oats.—G. W. Goodwin, Litchfield Co., Conn. The sample of oats which you forwarded to be named, are of the Black Poland variety, an excellent sort, in high esteem with those who have raised them. We have none of the rye for which you ask.

Crops in Iowa Injured.—J. Alexander, Linn Co., Iowa, writes, that the wheat crop of that State, a large part of which was stacked out, was much injured by recent heavy rains; also that much damage was done to corn, which was beaten down.

Large Wheat Yield in Wisconsin.—The *Sheboygan Zeitung* (Wis.) states, that Mr. Karpe, of Plymouth, threshed 225 bushels of winter wheat from $\frac{1}{4}$ acres. This is 50 bushels per acre, and Mr. K. claims the championship, until some one else in Wisconsin, or other Northern State, can make a larger show. The *American Agriculturist* likes to record such fine crops, but always prefers to tell how they are obtained—on what kind of soil, with what kind of treatment, and what the variety of wheat sown.

Grain in Chicago—Railroads.—There is better reason for calling Chicago "*Grainopolis*," than

for naming Cincinnati, *Porkopolis*. (*Polis* means a town or city.) Less than a dozen years ago the total grain business of Chicago was not half a million bushels a year. During the past year the receipts of grain in that city alone amounted to over thirty-five million bushels, sometimes reaching nearly or quite half a million bushels a day. There are fourteen large steam elevators for transferring grain to and from cars, boats, and storehouses. The storehouses have a capacity for over five million bushels.—The increased value already given to the grain, and to the lands producing it, would more than build all the vast networks of railroads terminating in Chicago. Most of the money to build these roads has come through Wall street in this City. We hope Western farmers at least, are learning to look upon railroad men as friends, and not as monopolists to be taken every advantage of possible. We can better excuse the prejudices of Eastern farmers, who look upon these railroads as agencies for bringing strong competitors to their markets.

Weevil in Grain.—George Lindsay, Westmoreland Co., Pa. When grain is infested with weevil, it should be threshed at once, and if possible dried in a kiln, which will destroy the insects. Many of them will be driven from the grain by passing it through the fanning mill. It has been recommended to fumigate grain bins so infested, with sulphur. Stop all cracks tightly, place the sulphur in an iron vessel, set it in the middle of the bin, light it and close the door; this it is said will kill most of the vermin. It is best not to store grain for several years, where the weevil have taken quarters.

We've got a Premium.—At the recent Queens Co. Agricultural Show, by way of helping out the Exhibition, our gardener filled up a pretty long table with sundry garden productions, vegetables, flowers, etc., etc.,—to the amount of three wagon loads. Intending to leave the field clear for others, cards were put up all over our table maked: "FOR EXHIBITION ONLY." But it seems that a big cabbage, or beet, or something else jutted out too far, and seizing upon this the Committee on "Vegetables and Roots," generously awarded us a premium. Query: What would they have given us if the whole table had been labeled "FOR COMPETITION?" Another joke is the fact that the prize awarded was one of our worthy \$2 cotemporaries, with which we already exchange two copies. We suggest to the Committee that the joke would have been a better one still had they awarded us a copy of the *American Agriculturist*, of which we see a considerable number of copies were given to others as premiums. That we could have appreciated, and we hope the change will yet be made. As it is, we feel slighted, and propose an immediate "Mass Meeting" of all the disappointed ones at all State and County fairs in the country.

Spades and Shovels.—We have a long communication from Mr. J. Stevens, complaining that manufacturers do not make a sufficient variety of spades and shovels to suit the wants of persons of different heights. A dealer, to whom we submitted the letter, says he has kept on sale 15 to 25 kinds and sizes, but that not more than a dozen kinds are ever called for, while nine teen out of twenty purchasers choose the smaller sizes, alleging that one of these is large enough to exhaust the strength of any man who will use it industriously during the entire day. We have one with a blade 14 inches long and 10 inches wide, and the handle proportionately long, but except for deep trenching it is not so convenient for breaking up the soil finely, and for rapid work, as one of the smaller dimensions. For breaking up and pulverizing a plot of ground, the spading-fork is preferable to the full-bladed spade. We think Mr. S. must have overlooked a number of establishments, or he would have found just the spade he describes as being desirable. At least any manufacturer would cheerfully furnish almost any thing in this line that he could possibly ask for. We submit to manufacturers, however, Mr. Stevens' suggestion that a part of the ordinary spades be provided with handles somewhat longer than those in common use. What is lost in power by the use of a long handle, may be gained in saving a tall man the necessity of bending his back.

Unit of Horse-Power.—Answer to queries from several readers of the *Agriculturist*. The average power of a horse is reckoned as equivalent to the raising of 32,000 lbs. one foot per minute, and this is the unit of measure in estimating the power of steam engines, etc. A horse walking at the rate of four miles an hour, travels 352 feet per minute. Going at this rate, he would only have to pull on a rope sufficient to draw up a weight of 91 lbs. (nearly), to exert the same power as would be required to raise 32,000 lbs. one foot in a full minute. If traveling only three miles an hour, the constant weight to lift would be 121½ lbs. If traveling ten miles an hour, the average draught would be about 36½ lbs. By recent enactment, the Austrian government has

fixed the legal horse power for that empire at 32,982 85 lbs. (or nearly 33,000 lbs.) raised one foot per minute. (430 *Pfund* raised 1 *Fuss* per second—76 kilogrammes raised 1 metre per second.)

Setting Fence Posts.—Wm. McLachler, Oneida Co., N. Y., advises to fill the holes around posts with sand or gravel, when setting them, to prevent their being heaved out by frost. A surer remedy is to drain the adjacent ground, and thus draw off the water which causes the heaving by freezing and thawing. Water, or water saturated soil, expands much more in freezing, than mere damp soil. Dry soil contracts with cold. A soil freed from standing water, will heave very little by frost.

Pump Wanted.—"H. A. S." Middlebury Vt. suggests to inventors that a pump is needed for supplying pastures, where there is no running water, and other locations distant from the residence of the owner. He thinks a pump to be worked by electro magnetism, made cheaply, might be contrived to work with little attention. It would not need to be very powerful, as a very small continuous stream of water would be sufficient.

Prolific Sow.—S. Dodge, Essex Co., N. J. reports to the *American Agriculturist*, that a sow, owned by him dropped 17 pigs in September last; 16 of them are living at this date, Oct. 15th, one having been overlaid and killed. The sow is a very large animal, partly of Berkshire breed. Do any of our readers know a case of greater prolificness?

Drumming out Rats.—A subscriber at Farmington, O., writes that rats will not remain in a building where a drum is beaten occasionally. This may be so; the idea is confirmed by another correspondent who relates that the rats left his corn cribs, when a hand-sheller, that made a great racket, was introduced. No doubt an unusual noise would frighten them away at first, but we imagine they would soon become accustomed to it, and remain undisturbed.

Refuse Oil for Sheep Ticks.—"S. S. D." Dayton, O., writes to the *American Agriculturist*, that a neighbor of his destroyed sheep ticks by liberal application of the sediment from an oil cask to the skins of lambs that were badly infested with these vermin.

Cleaning out Vaults.—P. Jagaer, Columbia Co., N. Y. Those following the business in this city, use long handled shovels, ladles, and buckets, and do not enter the vault. Much was hoped from a plan to construct air tight boxes or carts with a hose attached to run through the house from the street, and into the vault. An air pump was to exhaust the air from the box, and the contents of the privy were to flow in and fill the vacuum. This might answer if the contents were sufficiently liquid. The plan did not work well, and has been abandoned for the scoop and buckets.

Salt Mud.—"W. B." Westchester Co., N. Y. The vast deposits of black muck and peaty matter, along the margins of salt water, do not greatly differ in character and value from the inland fresh water muck swamps, and their treatment is similar. Some think the salt muck the most valuable of the two, owing to its chloride of sodium (salt) and other mineral substances, and this is probably the case where these are not counterbalanced by excess of fine sand washed in by waves. The only practicable treatment we can recommend is to remove it to dry land, adding lime, unleached ashes, or refuse potash, to decompose it. After being awhile mixed with alkalies, it may well be added in unlimited quantity to the yards and stables to absorb all the liquid manure, and be composted with the more solid manures. It may be used with manure in considerable quantities without any previous alkaline treatment, but with this previous addition the quantity can be largely increased. After alkaline decomposition, it may be used directly upon and in the soil. Untold millions of dollars worth of produce will yet be raised with the aid of our unlimited deposits of black vegetable material along our sea coasts, bays, etc.

Home-Made Bone Manure.—A. F. G., of West Gardner, Me., writes to the *American Agriculturist* that he makes a good bone manure thus: A kettle holding a barrel or more, which is kept for boiling roots for stock, is filled with bones, and caustic lye poured in to cover them. A gentle fire is built for two or three successive days, to barely warm the liquor through. In a week the bones become soft and fine. The mass obtained from one barrel of bones is then mixed well with about three loads of muck, the leached ashes from which the lye was obtained, being mixed with the heap. After lying awhile for the muck to partly decompose, the fertilizer

is ready for use, and produces good effects. If not the best mode, this is certainly one easily practised on most farms, and it is far better than to let the bones go to waste.

Hydraulic Lime not Injurious to Water.—W. W. Dashiell, Sussex Co., Del., inquires, whether the water will be affected by the lime, if a well be walled up with rough stones laid in mortar, made with Rosendale cement. We should say decidedly not. After the mortar has thoroughly set, chemical tests scarcely discover in the water a trace of lime or other material derived from the cement. We use for drinking and family purposes only pure "distilled" water, as it falls from the clouds upon an upper roof, and is retained in a cistern well coated with hydraulic lime mortar. It is far purer, and sweeter to the accustomed taste, than the purest spring or well water.

Why so few Pears.—Everybody is fond of good, melting, juicy pears. Two to ten cents a piece is readily paid for all the passably good pears brought to our market, and there is always a call for more. We have seen many baskets of pears, holding a scant bushel, sold for \$4 to \$6 a basket this year, and higher prices are frequently paid for early lots of good Bartlett's. A correspondent of the *American Agriculturist*, in a long communication on this subject, argues that pear trees, where once well growing, are very productive and profitable. His conclusion is, that the high price asked for good trees by nurserymen, is the main reason why so few plant pear trees. He had intended to plant an acre of Bartlett trees, but found that the trees alone would cost him \$80. But according to his own story, the pear orchard would pay well on that preliminary cost, and he admits the difficulty experienced by nurserymen in producing a lot of really good trees. There is undoubtedly a demand for more good pear trees at moderate cost, than can yet be supplied by nurserymen, and it stands them in pocket to make up the deficiency as early as may be. There is likely to be a demand for all the good pear trees that can be produced at moderate prices for some years to come. Nurserymen would do well to devote more attention to getting up a stock of a few really good sorts, and less to having a large catalogue of good, bad and indifferent trees. We have seen several collections of 50 to 100 varieties of pears on the tables of our fairs this year; but among all these there are seldom more than a dozen kinds really worth cultivating.

Raising Seedling Grapes.—W. G. Felton, Chester Co., Pa. The seeds should be put in sand or earth as soon as taken from the fruit. Keep it moderately moist until next Spring, than plant in drills in a favorable location. It is generally considered advisable to sow seeds from improved varieties; there is, however no certainty as to whether the produce will be valuable or worthless. It is considered good success if one seedling in a hundred proves valuable.

Seedling Grapes.—J. N. Hawkins, of Suffolk Co., L. I., sends to our tables two varieties of new seedlings. The small purple clusters are not worth propagating—hardly equal to some of the wild fox grapes. The others are very fine; clusters large and well shouldered; berries of good size, round, thin skin, little pulp, sweet, and light color, strongly resembling the Rebecca. It is said to be a seedling from the Isabella, and has been named the "Hawkin's White." If hardy, prolific, a good grower, and free from disease, it will be a decided acquisition.

The Finest Delaware Grapes we have seen, were in a box placed upon our table by B. H. Mace, of Newburg, N. Y., as our last number went to press. The bunches were large, well packed, and many of the berries measured five-eighths of an inch in diameter. Mr. M. says he has obtained them three-quarters of an inch in diameter. The demand for vines has hitherto prevented much attention to the production of the best fruit. Many are now turning their attention solely, or mainly, to fruiting, and the specimens before us indicate what may be done.

Raisins from Grapes.—P. Wright, York Co., Pa. Raisins are ripe grapes, dried without being pressed. In Southern Europe, whence we receive most of our raisins, the selected clusters are spread on smooth clay banks, sloping towards the sun, with a wall upon the north side. A movable shelving cover is placed over them at night, and during rains. The clusters are carefully turned once during the process. A little artificial heat would probably be needed in our country, or at least in this latitude. The grapes used are sweet sorts, such as Muscatelle, Malaga, Black Smyrna, etc. The "dried currants" are really a small variety of grapes, dried in the manner described above.

Tokay Wine.—Suggestive to Grape Growers.—The celebrated Tokay wine, the finest in the world, it seems is not produced on so small an area as has been reported—two or three vineyards—but the Tokaj, or Hegyalja vineyards cover 60,000 acres, yielding 1,675,000 gallons of wine, of which 50,000 gallons are superfine, 375,000 gallons superior, and 1,250,000 gallons ordinary. The land is dug over three times; the vines are placed 1½ feet apart, only three to five buds being left on each stock, and the vines are trained to stakes and only allowed to grow three or four feet high. The soil is poor and volcanic, and is never manured. The Tokay wine comes from grapes ripened on the sides of mountains, where the air is dry and in constant motion, and the sunbeams are never intercepted. In these places the vine disease is wholly unknown. These statements, gathered from a pamphlet upon the wines of Hungary, recently published by a Hungarian gentleman, M. de Szemere, are suggestive to grape growers.

Frauds in Wine.—It is claimed that an abundant production of grape wine in this country would alleviate the evils of intemperance, by supplying a light, pure, stimulating drink for the masses. This does not seem to be the case in France. In Paris, and in Cotte, in which are the principal manufactories of fraudulent wine, the business is carried on to an enormous extent, and so perfect is the process of imitation, that the chemists can no longer detect and expose the fraud. A competent authority states, that it is certain that there is not a drop of grape juice in more than half the vast quantities of wine drunk by the people of Paris. Of the many millions of bottles of wine imported annually in this country, at high rates, and drank under high sounding names, with much smacking of lips, it is morally certain that not one bottle in a thousand is anything more than a chemical concoction of alcohol and drugs, without a teaspoonful of grape juice in a hoghead.

Dry the Green Lima Beans.—Whether the frosts come early or late, there will always be some unripe pods on the Lima bean vines. If large enough to shell at all, they are worth preserving. We generally save a fair Winter's supply of these green beans by simply shelling and drying in the sun, on a warm side of the house, or on the piazza roof. They cure and keep well, and when cooked in Winter and Spring, are almost as tender and good as the green beans picked from the vines and cooked in Autumn.

Making Lima Beans Perennial.—It may not be known to all the readers of the *Agriculturist*, that Lima beans, and the pole beans generally, can be continued in growth from year to year, without new seed. In Autumn, before the leaves are withered by frost, remove the runners, leaving a foot or so of the main stalks and leaves. Take up the roots and plant in pots or boxes of earth, and set them in a light, airy cellar, or other room, where they will be protected from the frost. A green-house is preferable, but not essential. Keep the earth moist, but not wet. Light and just warmth enough are required to promote the growth of a few roots and incipient leaves—in other words to keep the plants alive. In Spring they will begin to grow well, and as soon as frosts are over they can be set out in the open ground, where they will start into vigorous growth, and produce large vines, and a good crop of beans a month or more earlier than those raised from seed. In Autumn, the same roots may be again taken up, and so on from year to year, making the bean in reality a perennial. Simply to lay the plants in sand in a cellar, and keep them in an entirely dormant state, has not proved successful, so far as our experiments have gone.

Keeping Sweet Potatoes.—"Subscriber," Coffey Co. Kansas. Sweet potatoes keep through the winter best, when covered in a dry sand hill, or other dry earth beyond the reach of frost. They may be put in boxes of one bushel each, or spread into layers in the bottom of a pit, and cover with dry earth. They should be carefully dug and handled previously, so as not to bruise them. For use during early winter before opening the pit, pack some in boxes of sand or dry earth and keep in a dry place away from frost.

English Speckled Pen.—N. B. K., Lowell, Penobscot Co., Me., writes that he planted some of these among potatoes, on highly manured land, and had an extraordinary growth of haulm, some stalks measuring nearly 8 feet in length. From one pea he counted 84 pods, measuring 6½ feet in length.

Winter Barley.—A sample of 6-rowed barley, from Chas. Chapman, Ottawa Co., C. W., is very fine: straw large; heads long and 6-rowed; claimed to yield remarkably well. It is said to have been "bred up" from a single head of large size found in England.

Muck for Bedding.—S. B. Tomkins, Ulster Co., N. Y. Dry muck answers a good purpose as bedding for cattle. About half a cord will last one animal two weeks. It should be thrown out and replaced with new, when saturated with liquid manure. The solid excrements should of course be thrown out daily.

Premium Butter.—J. Perkins, Cuyahoga Co., O. writes that he has taken the premium of \$3 at their County Fair, for butter made and kept according to a hint derived from page 138, May *Agriculturist*. That item alone pays him for two years' subscription.

Cypress Vine.—R. T. Your seeds would probably have come up, had you soaked them in warm water before sowing. Let the water be brought just to the point of scalding, then pour into a saucer, and let the seeds lie in it for three or four hours. They will then almost surely vegetate.

Raising Fig Trees.—Cynthia M. Green, Broome Co., N. Y. Figs are difficult to raise from seed. Better get one or more trees of such kinds as are desired, from a nurseryman, and increase the stock at pleasure, by means of cuttings put into the ground in Spring. They root as readily as currant bushes. Layering the branches is still better. Before severe frost, gather up the branches, tying them with a strong band, and set over them hogheads or barrels without heads, and fill up with earth. If too high for one hoghead, set another on top of the first. They may also be banked up with earth, or bent down and covered with soil. With this simple protection, figs may be readily raised in the Northern States.

Hot Sand for Drying Flowers and Leaves.—Many flowers and leaves that will not retain their color when dried in the air, or between sheets of paper, can be cured so as to preserve their tints, as follows: Heat a quantity of fine clean sand in a kettle or other vessel, too hot for the hand, but not hot enough to char a piece of white paper left in it. Spread a layer of this an inch or so deep; put over it a sheet of white blotting paper, or herbarium paper; lay on the flowers or leaves; cover with another sheet of paper, and add more or less hot sand. Flat leaves may be covered with a thick layer; more delicate flowers should have little sand over them, or their petals will be crushed. Some succulent plants may need several successive dryings to remove all their juices, while a single treatment will answer for others. A little practice will enable any one to successfully cure most kinds of plants, which dried thus generally retain their natural green or other colors, instead of turning brown.

Books on Barns and other Farm Buildings.—"G. E. P.," Canadensis, Pa. We know of no work specially devoted to barn architecture. "Allen's Rural Architecture" (\$1.25) gives many practical hints on barns and all other farm structures, though we should not build a barn exactly like any of the plans proposed in that work, or even like those described in the Seventeenth Volume of the *Agriculturist*, (1858). That volume, by the way, contains a pretty full discussion of farm buildings, with illustrations, running through nine months, and includes laborer's cottages, farm houses and appendages, ash and smoke houses, barns, stables, carriage houses, cart and wagon sheds, workshops, turkey and hen coops, piggery, poultry, and pigeon houses, etc. (Price in numbers, post-paid, \$1.12.—bound \$1.50, or \$2.00 if sent by mail.) A premium plan for barn and carriage house combined, was published in July, 1860 (Vol. 19). In August following is a plan of our own barn and carriage house, which, after a year and a half's trial, we think is the most complete one we have yet seen for the same purposes.

Record of the Times.—A comprehensive history of the current events, giving for present reference and future preservation, the principal facts and incidents occurring in this eventful period, is now being issued by John D. Torrey, Publisher of this city. The work is valuable, as it embraces in chronological order a general and concise, but full record of what is transpiring, and it appears to be prepared with industry and care to make it authentic. All who wish to read and preserve, apart from newspaper rumors and reports, the great facts and incidents of the time, will be glad to secure this work. It is issued in weekly numbers at 10 cents each, and in semi-monthly, and monthly parts at 30 and 40 cents each.

Not Economy.—An assistant, after reading a proof of our article in the Household Department on Economy, and other articles in the same vein, suggests that we are "cutting our own fingers off"—for the tendency will be to lead people, in their efforts to economize,

to drop the *Agriculturist* also. Well, if that be the case, we must suffer, and will cheerfully bear our part—for we believe, and must therefore advise, that people ought to economize now. But the feared result is hardly to be expected. If the *Agriculturist* has pointed out a way to save five dollars this year, or suggested any means of increasing the product of the labors of the field, garden, or house, to the amount of five or ten dollars only, it will be quite likely to do the same thing another year, and it would seem to be the best economy to have it on hand. We do not believe a single person has received this journal for a year without having been directly or indirectly benefited more than five dollars. It is not always that one is cognizant of the origin of his present way of thinking and practice. The thousand facts, hints, and suggestions given during a year in a journal like this, enter into a person's thoughts, and lead to other thoughts, without his being aware of it at the time.

Knighting the Plow.—The French are about instituting a new order of knighthood, to be conferred upon the most successful farmers, of whom one in each Canton is to receive the "Medaille Agricole," which represents an annuity of 100 francs from government.

Probably True.—A gentleman, whom we recognize as cashier of one of the leading banks of New Hampshire, in a letter respecting some horticultural matters, incidentally adds the following: "...The *Agriculturist* has come to be almost one of the necessities of life. ... Millions of flowers in many thousand of gardens, scattered all along from Canada to Mexico, and from the Atlantic to the Pacific, spring into life by its agency and influence. Its hints make numberless gardens to be better tilled, and their owners more happy, over this immense extent of territory. Its impression for good is made upon both the out-door surroundings, and upon the families within, so much so, that one who knew enough could read its 'cypher' on thousands of homesteads..."

Indirect Influence.—We would not over "magnify our office," but many testimonies, of which the above is a specimen, are certainly a source of satisfaction. The direct influence of the *Agriculturist* upon its vast circle of readers is doubtless large, but even this is scarcely equal to its indirect influence. We exchange with nearly two thousand other journals, and most of these are all the while copying the more valuable hints and suggestions of the *Agriculturist*—too often without credit. The articles and items thus copied, are passed along from one journal to another, so that they form the great staple of the agricultural, horticultural, and household columns of the three thousand journals of the country. A recent examination of a large number of papers showed that much more than one half of all the good items and articles, pertaining to farming and gardening, that are now circulating in the country, were originally prepared for and appeared first in the columns of the *American Agriculturist*—though scarcely a tithe of them have retained the credit of their origin. A contemporary editor recently remarked that he had found this to be so much the case, that hereafter when he copied any good agricultural article, going around without credit, he should, as a matter of course, credit it to the *American Agriculturist*.

Horse-Shoes for Snow.—A correspondent of the *American Agriculturist* suggests that the balling of snow on horses' feet may be materially lessened, by making the upper side of the shoes wider than the lower side, so that the inner edge will be beveling outward. If constructed in this way, the balls of snow would more readily fall out than if held by square-sided shoes. The suggestion is not a new one—at least we have heard of it before, we believe—but it would seem to be valuable, and worthy the attention of blacksmiths, or those who have horses to be shod. At best, damp snow will pack into the shoe, but if the lower side of the opening be the widest it will be more likely to drop out.

To Prevent Ivy Poisoning.—George P. Ray, Marlton Co. Mo., writes to the *American Agriculturist* that Ivy poisoning can be prevented by washing the exposed part with a solution of sal soda, or with strong ley of wood ashes. W. Olds, Whiteside Co., directs to wash with a strong solution of epsom salts, which he says will effect a speedy cure of the poisoned parts.

Liniment for Chronic Rheumatism. Among several recipes for different forms of rheumatism, the *American Druggists' Circular* gives the following prescription for the chronic form: Mix 9 ounces of Camphorated soap liniment, ½ ounce of tincture of cantharides, ¼ ounce tincture of opium (laudanum), and 1½ drachms of iodide of potassium. This mixture or compound liniment is to be occasionally rubbed upon the parts affected.

Hardy Cotton.—The Lebanon Democrat Pa., states that Dr. Reinhard, a German Physician of Lancaster Co., has found a species of cotton plant in Brazil, which thrives well in a climate as cold as that of Pennsylvania. Dr. R. predicts that in a very few years plenty of cotton will be grown in the State of Pennsylvania.

Of the Cotton Plant referred to last month, we have little to say in answer to the numerous letters received. We only intended to place before the public Mr. Kendall's own statements and put him in communication with those disposed to investigate the subject. A plant having the merits he claims for this, is worth looking after. It seems rather singular, however, that we have not long since heard more of it, if it grows so abundantly on the much frequented coast of South America.

Making Cloth Non-inflamable.—The recent burning to death of 7 females in Philadelphia, by their clothes taking fire from a gas light, recalls attention to the importance of rendering non-inflamable the light fabrics worn by ladies or children who are in any way exposed to fires or lights. Any cloth, even the most delicate cambric or gauze, is not injured in the least by dipping it in a weak solution of chloride of zinc, or sulphate of ammonia, or tungstate of soda. If thus dipped before drying the fabric may be burned to a crisp, or entirely destroyed in the flame of a lamp without bursting into the least flame. These articles, particularly the first two, can be obtained very cheaply of any druggist. The last named is rather the best of the three, but more expensive.

Cheap Home-made Embellishments for the House in Winter.

We do not refer now to furniture, paintings, books, engravings, or anything of that sort; but rather to floral embellishments. The many colored leaves which strew the ground in Autumn, if gathered and pressed and varnished, may be wrought into beautiful wreaths and bouquets, which will hold their colors all Winter. Fasten them leaf by leaf to a piece of Bristol board with gum arabic, in such order as female taste will suggest, and the effect will be very pleasing. Many Autumnal flowers may be treated in the same way. When the bouquet is completed, insert the Bristol board in a gilt frame, cover with glass, and you have the effect of a fine painting.

Much use can be made of another class of flowers, which go under the general name of "everlasting flowers," or *immortelles*, as the French have it. These are employed for filling vases to adorn mantels and tables. They have some advantages over common house-plants, in that they need no watering, are not hurt by frost, or infested by insects, and are sure to blossom all the while. They retain their colors for several years. Who does not want a bouquet of everlasting flowers? We must try to get seed enough for our Winter's distribution, so that all who desire may have a supply of these flowers next Autumn. The golden everlasting flower, glossy and brilliant, is one of the commonest. Sow the seeds early in May in any garden soil, and they will mature before frost. They should be gathered before the seed vessels are quite mature, or the blooms will fall in pieces when dry. There is a white variety of the same species which is quite desirable.

The Globe Amaranth, (*Gomphrena globosa*), is another first rate Winter flower. The varieties are numerous—white, pink, purplish crimson, striped, and orange. These will also grow from seed in any warm spot. But the seed being covered with a tough shell, needs to be soaked a few minutes in scalding water before sowing, or in tepid water for twenty four hours, otherwise it will not certainly vegetate. Cut the flowers as soon as they are fairly matured: if left longer they will lose their brilliancy.

Beside these, there are some newer sorts of everlastings, such as the *Xeranthemum*, white and purple, the *Acorolneum*, white and pink, very delicate and beautiful.

The foregoing may be worked up into bouquets, using with them some of the ornamental grasses, such as *Breza mazima* and *minima*, whose pendulous and graceful spikelets will contribute much to the finish of the whole. Some of our wild grasses found on the borders of grain fields, have feathery plumes which may well be added.

It is not too late now to provide all or nearly all of these plants. The pressed leaves and flow-

ers first referred to above, may hang upon the walls of parlor or chamber; the others wrought into bouquets of various styles, may occupy vases on the mantel and bracket and on the side table, and with their perennial freshness cheat the long Winter days of much of their dreariness.

Prices of "Breadstuffs"—All Classes Interested.

This is a subject that comes home to every one. The cultivator who derives his living from the soil, is of course directly interested. He may not raise wheat, corn, or rye for market, yet the values of most other products of the soil are governed by the market value of the great breadstuff cereals—wheat and corn.

The mechanic, the manufacturer, the factory operative, the merchant, the day laborer, the needle woman, are all interested in the supply and the price of these leading products of the soil which constitute the staple food of all classes. And just here we must correct a false impression. There are probably fifteen or twenty thousand persons engaged in other pursuits than agriculture, who take and read this journal for the benefit of their gardens and households. One of this class, in a letter before us, says:

"....The *Agriculturist* seems to be always jubilant over any rise in the price of wheat, flour, or corn. Does the Editor have any sympathy for that large class of his readers who are compelled to pay the increase in price from their scanty earnings? This year we, factory operatives in this town, made up a club of 130 subscribers for the *Agriculturist*, and we have been applying its hints and suggestions in our little garden plots, and have gained much therefrom, in pleasure at least. But what shall we think of the constant rejoicing of our editors over the rise of a dollar a barrel, or more, on the flour which we must buy, or starve...."

Our correspondent takes a short-sighted view. Let us look into the matter a little. Suppose that from the surplus wheat crop of the present year, including that left over from the previous crop, we can spare from the whole country say 60,000,000 bushels, and that the demand be sufficient and the price high enough to cause its exportation. Without this demand and increased price abroad the grain would of course remain upon our hands. The exportation of this wheat (or its equivalent in flour) brings back in some form, about seventy-five million dollars (\$75,000,000). Is it not obvious that this positive addition to our wealth must be felt throughout all the ramifications of business. If the farmers receive half of it, and the dealers and employees on our lines of transportation, storehouses and ships, receive the other half, they have just so much more money to pay for manufactured articles, etc. This will necessarily create more trade, and increased demand for the labor of manufacturing operatives. For example: early in the present year many of the factories of New-England and elsewhere stopped work, or run but half time, and the incomes of vast multitudes were reduced half or more. But the foreign demand for breadstuffs has quickened the whole business of the country, and it is safe to say that the manufacturing classes are now getting double the work and pay that they could possibly have done but for the increased foreign demand and higher prices of breadstuffs.

But how much is the manufacturing laborer taxed by the higher prices? A family of four persons ordinarily consume about one barrel of flour in three months. The rise of even \$3 per barrel in the price of flour, is only a tax of \$1 per month upon such a family, while the increase of

\$3 per barrel on the flour made from 60,000,000 bushels of wheat, would be a real gain to the country of thirty-six million dollars (\$36,000,000!)

We think these figures will convince not only our particular correspondent, but all others, that in this great agricultural country, we are all, no matter what individual callings may be, specially interested in having the price of our agricultural products range at the highest possible figures, provided the high rates be not the result of a short supply from crops here, but of a large foreign demand. After this showing, we trust even our manufacturing readers will have a livelier interest in the facts and figures relating to the breadstuff commerce both in our own and foreign countries. We congratulate ourselves on the fact that for months past the *Agriculturist* has been in advance on this subject. We have endeavored to inspire hope for the future, at least, by constantly showing that there would of necessity be a short foreign crop, and a consequent demand upon this country. In this, we have not rejoiced at the losses of our transatlantic brethren, but we have seen in it a new evidence of the over-ruling hand of a kind Providence.

This country is involved in one of the most important struggles in the history of the world—a struggle to establish whether or not a republican representative form of government is adapted to the wants of the great family of man. It is a question in which not we alone are interested, but it directly concerns the people of all the world, and unborn millions after us. If the experiment that has been going on here for 85 years past should or could now prove a failure, when, or where would another be made? We are daily more and more impressed with the kindness of that Providence, which has so ordered that other nations who are almost equally interested with ourselves, and who can now afford it, should come to our assistance. Direct aid or intervention in our affairs would be neither desirable nor expedient; but no more effective aid could have been given than the sending us a hundred millions of dollars for the surplus produce which have been kindly bestowed upon our country by Him who sendeth the early and the latter rain.

Prospects of Farmers—The Produce Markets—The Great Foreign Demand.

The activity in the New-York Breadstuff Markets, referred to in our last, has continued without abatement. The exact figures and statistics will be given in our Market-Review, not yet made up. As the future market here will be so largely dependent upon the course of trade in Europe, it will interest our readers to learn further concerning the foreign grain prospects. The important summary of the Breadstuff trade for the last Grain year, which we gave last month, has been widely copied. We there stated, with the reasons for the assertion, that "there is, and is to be for some time to come, a heavy demand upon our markets to supply the deficiency of breadstuffs in Great Britain, and especially in France, and to some extent in other parts of Europe;" and that "all the surplus we can well spare at anything like present prices will be called for abroad, even if it be paid for in gold." But these strong statements feebly expressed the actual condition of the foreign demand. On the very day our article was written, Sept. 16, the London *Mark Lane Express*, the highest authority on such matters in

Europe, published an editorial article on the state of the British and French Corn (Wheat) Markets, including a translation of authentic reports from forty-two important grain districts in the latter country. Without following the language or order of the long summary of the *Mark Lane Express*, we will condense some of the statements, and the conclusions arrived at:

1.—France has been generally, and particularly for two or three years past, an exporter of wheat. This year, not only is there no old stock of wheat in that country to fall back upon, but the deficiency in France alone is estimated at 8,000,000 quarters, or **sixty-four million bushels**! The Government is alarmed, and has not only thrown open the ports to free importations of grain, but the indications are that measures will be taken to prohibit export, should higher prices elsewhere make such prohibition necessary to retain all the grain in, and to come into, that country.

2.—The Roman Government has already issued a prohibition against any export of grain, and the measure will probably be followed by all the other Italian States. These indications are mainly important as showing that, with some few exceptions, the deficiency in the past harvest has been general throughout Europe.

3.—In the great wheat-growing *Baltic Provinces* the harvest was less productive than usual, and there will be less to export this year.

4.—Spain, Belgium and Holland will be buyers of grain this year—an event that seldom happens.

5.—In Great Britain, says the *M. L. Express*, it has now become evident to every one at all conversant with harvesting affairs, that the wheat is not only deficient in yield, but also that the breadth sown was much less than the average.

6.—In Great Britain the average annual consumption of foreign grown wheat, for the past eleven years, has amounted, in round numbers, to 5,000,000 quarters, or 40,000,000 bushels a year. (The importation of wheat into Great Britain for the past year was ten and a half million quarters, or 85,000,000 bushels, nearly all of which went into consumption, in addition to the home growth of the harvest of 1860.)

7.—The average annual wheat crop of Great Britain is about 120,000,000 bushels, we believe. For the harvest of 1861, taking into account the low yield, and the limited breadth sown, the deficiency can not be estimated at less than one-fifth, or 24,000,000 bushels, which added to the average importation, makes the foreign demand this year for Great Britain alone **64,000,000 bushels**! [The deficit of 24,000,000 bushels for the current year is probably under-estimated if anything. Some place it at fully one-fourth or 30,000,000 bushels. It is also to be taken into account, that owing to the previous bad harvest, the stock of good wheat on hand at the opening of the recent English harvest was very low, so that the new crop entered at once into consumption. Considering this, together with the fact that relatively higher prices in France incited unusual exports to that country from England, it will not be surprising if the home grown English wheat is exhausted much earlier than usual.—Ed. *Amer. Agr.*]

8.—France and Great Britain together will therefore require, to make up the deficiency of this year's harvest, **one hundred and forty-four millions (144,000,000) bushels of wheat**!—equal to nine thousand ship loads, at 16,000 bushels each!

9.—It is probable that the increased price will somewhat lessen the average consumption, es-

pecially as the lack of cotton, and the lessened demand from the United States for manufactured goods, will decrease the ability to purchase food. It has been found, however, that the poorer classes consume less meat in times of depression, and eat more bread which is always a cheaper food than meat. But after allowing for all deductions, the *Express* may well say: "It is best to look this dilemma in the face at once....nor is there any time to be lost.".... "We shall this year have to compete with France, Spain, Holland and Belgium in the other markets.".... "France is alive to the exigency, and the Government does not wait for private enterprise.".... "Unless our merchants bestir themselves, we shall be forestalled in all the grain-exporting ports of Europe, as well as in those of the United States."....

Such are the views taken of the matter by a leading foreign journal. The readers of the *American Agriculturist* will bear witness that we have for months past predicted this state of things, and we will only add, that what we have hitherto written has not been founded upon opinion merely, nor has the wish been father to the thought, but we have spared no effort to ascertain the real condition of the foreign grain crops, so far as that condition would be likely to affect the interests of this country.

The Home Trade in Breadstuffs.—How much can we Export this Year?

"How much Wheat and Flour can the United States spare this year?" is a question of general interest, not only here, but in Europe, in view of the great foreign demand referred to in another article. Unfortunately, we have not yet in this country any method of gathering accurate statistics of the crops. All is guess-work, and anything we may offer is to be taken as merely an opinion founded upon general observation and report, and such special sources of information as our position naturally gives.

That the Wheat harvest of 1860 was unprecedented, in our country, is conceded on all hands. As soon as threshing commenced, considerable quantities were hurried forward to the Eastern markets, partly to supply the home demand, and partly for a limited export. It was late in the season before we had positive information regarding the real deficiency resulting from the late, rainy harvest in England. Prices at the West were moderate, and few farmers were willing to accept the proffered rates, except those compelled to do so by absolute necessity. The result was, that only a very small part of our surplus, comparatively, was forwarded up to the close of navigation. The receipts at New-York, from all sources, for three months ending Nov. 19, 1860, were about 1,560,000 barrels of Flour, and 10,281,000 bushels of Wheat, equivalent, in round numbers, to 18,081,000 bushels of Wheat.

During the Winter, considerable amounts were concentrated at Chicago and other points, by railroad, and small quantities were sent east by the same method of transportation. The receipts at New-York from Nov. 19, 1860, to May 1, 1861, were 1,280,479 barrels of Flour, and 4,924,300 bushels of Wheat—equivalent to 11,327,000 bushels of Wheat.

Before the opening of navigation the present year, the utter prostration of Western money secured by Southern State Stocks, so deranged the Western currency, and so violently disturbed the exchanges, that it was next to im-

possible to carry on extensive operations in Breadstuffs. The total receipts at New-York, from the opening of navigation, May 1, 1861, to August 15, amounted to 9,500,000 bushels of Wheat, and 1,401,400 barrels of Flour, making the total of Flour and Wheat brought forward from the harvest of 1860, up to the beginning of the new crop receipts, equivalent to about 46,000,000 bushels of Wheat. It is safe to guess that this was scarcely half of the surplus of the harvest of 1860.

The harvest of 1861 was good—fully an average for Winter Wheat, though, from all accounts, below the average for Spring varieties, especially in the States west and northwest of Indiana. After allowing liberally for home consumption, it is probable that the surplus of the 1861 harvest was sufficient to equal all the shipments eastward since the threshing of the new crop commenced, leaving an amount equivalent to the unsold surplus of last year's crop still stored in the barns, granaries and stacks of the Western and Middle States, and the Canadas. Indeed, from the want of means to move it, there has been comparatively little grain exported direct from Canada, for several months.

Looking over all the ground, we conclude that should the foreign demand be such for the next nine months, as to produce high prices enough at our seaboard to draw out the last surplus bushel from the remoter portions of this country, including those parts of Canada, from which supplies are brought to or through the United States, the amount would aggregate anywhere from 60,000,000 to 80,000,000 bshs., Wheat and Flour included—probably nearer to the latter than to the former figures. Very high prices would probably greatly limit our export, by drawing out supplies from Eastern Europe, in competition with the American market.

The only limits to the present transactions are the capacity of the canals and railroads to bring Wheat and Flour, and the lack of ocean vessels at moderate freight rates. When the inland water navigation closes, the supplies for the New-York market will be limited to the capacity of the railroads. The stock at the seaboard will run low, ships will compete for loading at low rates, the foreign demand will be large, and as a consequence, prices here will undoubtedly rule high during the Winter.

The railroads, being without competition during the winter months, and having all the business they can do, will probably charge high rates, which will make considerable difference between the prices at the West and the seaboard. Still, the high rates here will react favorably upon the interior, and, with the continued active foreign demand, and the abundance of money in the country, we shall look for the prevalence of fair prices for breadstuffs throughout the country, for at least six or eight months to come. Beyond that we cannot estimate. A large breadth of Wheat will undoubtedly be sown in Great Britain and the rest of Europe this Fall, and should their next crop be a good one, it will check imports from this country. Let us make hay while the sun shines. Wheat will sell at some price above the cost of transportation. We may not be able to say as much of our immense stores of Corn, both of the old and new crop. The absence of frost, (none up to this date, Oct. 18,) will add many million bushels to the corn crop of this year. On page 341, we have referred to the value of Corn for food. Let us consume it largely, and save our Wheat, and get it to market while the foreign demand continues.

Draining—Why—Where—How.

(Concluded from pp. 36, 70, 105, 137, 169, 201, 233, 264, 297.)

In the nine chapters already given on this important subject, and in sundry basket items, we have perhaps treated it as fully as is expedient in a periodical, and we therefore purpose to suspend the regular continued discussion—but not to stop talking or writing about draining. Farmers are beginning to learn something of the advantages—the profit—of removing excess of moisture from their land, to facilitate its cultivation, to lengthen its season, and to greatly augment its productive capability. In England this subject is so thoroughly understood, that the Government has already loaned some Thirty millions of Dollars to farmers to be expended solely in tile draining, and to be paid back in small annual instalments during 20 to 50 years to come. And this has not gone to marsh or swamp draining alone, but most of it has been loaned on land as dry as the average of American farms. The same course will be ultimately pursued here, though our wide-awake people will hardly wait for government aid. We shall keep agitating the subject, and from time to time present such information as we can. Hundreds of draining queries have been addressed to us this year, all of which have been answered, we believe, in some of the previous chapters. We will cheerfully answer any further questions. But there are many particulars connected with the subject, and those who have become interested, should procure one or both of the two American books recently published, viz: French's Farm Drainage, and Klippart's Land Drainage. The former is a very good work of 384 pages, costing \$1; the latter, just issued, comprises 475 pages, costs \$1.25, and is rather more full than the former. (The books can be sent post-paid at the above regular prices.) Our newer subscribers ought to read the articles in the present volume of the *Agriculturist*, if they can get them from a neighbor, or afford to buy the back numbers.—We add here an item or two crowded over from last month:

DISCOVERING FAULTS IN DRAINS.

As we have constantly advised, drains should always be laid down carefully and thoroughly, and every failure guarded against as far as possible. In case of any accidental failure, however, it is seldom necessary to begin at one end and take up the whole drain to find the point of failure. By a close examination of the soil along the surface, an unusual amount of wetness at any point will indicate the place of obstruction. In examining a drained field last Spring, where the drains had a fall of nearly a foot in a rod, we found in a hollow spot a little stream issuing upward—a diminutive spring overflowing upon the surface. The stoppage was found about three rods distant, under higher ground. The drain had been laid nearly level, if anything raised upward a little, to avoid digging deep, and at this point sand and clay had settled in and filled the drain, almost entirely choking it for half a dozen feet in length.

PRESERVE PLANS OF DRAINS.

As under drains are designed to be entirely out of sight, it is important to preserve accurate plans of their location. These plans may be drawn on paper, marking down especially their length, depth at different points, and the distances between them, and from different points in a direct line to the corners and sides of the field. Such plans should be kept in some secure

place, where the drainer himself or his successors can always find them. A farm will usually sell for a much higher price, if the owner can exhibit a plan of a good system of under-drains.

ANOTHER SIMPLE LEVELING INSTRUMENT.

In addition to the cheap leveling instruments shown on page 264, a correspondent describes another one which can be arranged in a few minutes with a common iron or steel "square." He likes the implement, and says, with his boy of 13 years old, he has leveled forward and backward with it over 150 rods, and varied scarcely an inch. In fig. 39 we have given the form as near as we can from the rough sketch furnished. A somewhat similar arrangement is given in "Thomas' Farm Implements." A small stake, *a*, is sharpened at one end, and slit

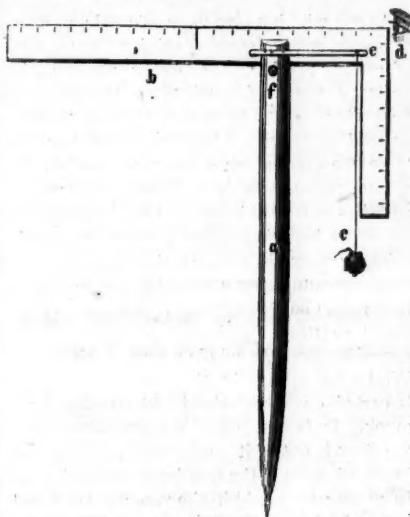


Fig. 39.

down three or four inches at the other with a saw. A common square, *b*, is placed in the slit, and held somewhat firmly, but not tight, by means of a screw, *f*, passing through the stake just under the square. A small stick, *e*, is tacked across the top of the stake, and from near the end of this a light stone or other weight, *c*, is suspended by a string. It is evident that the top edge of the square will be level when the string hangs exactly parallel with the short arm. By regulating the pressure with the screw, *f*, the square can be moved in the slit, and yet be held firmly enough in its place. A larger longer wooden square may be used in place of the common iron one, but the latter will answer for all ordinary leveling operations. The setting of the marking stakes, etc., and the grading of the drains are fully described on page 264, of the September *Agriculturist*.

One of the Clover Stalks.

Francis Schreiner of Crawford Co., Penn., sends to the office of the *American Agriculturist* a single Clover Plant, the second year from seed, which, when packed in, fills a box 4 feet long, 6 inches deep, and 4 inches wide. It has 70 main stalks from the same root, which, with their lateral branches, measure 1050 feet in aggregate length. The heads number 972. Mr. Schreiner says there are plenty more nearly as large as this in the field, which has never been manured, and he justly thinks it will be hard to beat.

IMPROVEMENT IN SORGHUM SUGAR MANUFACTURE.—At the recent Illinois State Agri-

cultural Exhibition a sample of sorghum sugar was shown by a Mr. Rogers, said to have been manufactured by a peculiar process which will infallibly produce sugar from sorghum whether green or ripe. If this be true it is of great importance. It is said that the process will be tested by further experiments this season, and then made known to the public.

Poor Wagons—Striking Figures.

A very important article on the "Motive Power of Wheel-Carriages," appears in the Coach-Maker's Magazine for October, going to show the great loss in using imperfect axles, heavy wagons, etc. The article is long, and we condense for the *American Agriculturist* a few of the hints given, using our own language mainly.

Every good mechanic knows that by placing the arms of the axletrees only an eighth of an inch out of the proper position the draft will be increased from 10 to 20 pounds. We all speak of one wagon as being "easy running" and of another as "hard running." The non-mechanic knows that, for some reason, of two wagons of the same weight, size, and general form, one will run much easier than the other, though few if any have ever thought of the real loss to the owner involved. Let us see what this amounts to, taking for illustration a heavy stage coach, weighing with its load $1\frac{1}{2}$ tons. The writer's observations show that such a coach will last 900 days if run 75 miles a day—making the distance traveled 67,500 miles. Allow the teamster's charges to be two-thirds of one cent per pound for each 100 miles, and the expense on the coach, would be \$13,500. It is probable that this amount is not above the average expended in hauling a strongly built stage coach during its entire running career. To draw a 3000 lb. stage, including load, requires a steady draft of from 300 to 400 lbs. Taking the highest figure (400,) and dividing the \$13,500 by it, we have \$33.75 for every pound draft while the wagon is wearing out! (The 300 lb. is probably nearer the true steady draft, and if so the cost would be \$45 for each pound of draft.)

The application is evident. If by more perfect form or construction, the steady draft can be reduced 10 lbs. it is a saving of \$337.50 in team expense on the single coach during its entire wear, at the lowest estimate, and \$450 at the higher rate. The same reasoning applies with more force to light carriages and wagons. Suppose a farm wagon to last 2 years constant running, or 10 years if running 60 days in a year, or 600 days in all, and that it costs \$1 per day for team and harness wear, or \$600 in all. If the average steady draft be 100 lbs. to draw the wagon, empty and loaded, the entire cost per pound of draft will be \$6. But if by the use of the improved case-hardened iron axles, and chilled pipe boxes, and by using lighter and stronger wood and iron, the average steady draft can be reduced to 80 lbs., the saving of \$6 on a pound in the amount and wear of horse-flesh and harness, will reach \$120 on the entire wear of a single wagon. These figures are striking—almost startling—but we think they are not over-stated. Look over them carefully and see if they are. At the very least they will indicate to every one the importance of looking well to the construction of any wheeled vehicles they may buy. Few may be able to decide upon the mechanical principles applied, or lacking, in their construction, but a few minutes' trial at the pole or thills will go far to test the comparative draft of two wagons or carriages offered.

Late Pasturing.

Some farmers keep their cattle out as late as possible in the Fall, and even into Winter. The pastures are gnawed very close, and even the after-math of the mowing fields, as if they never expected to get another crop of grass from them. This is very bad husbandry upon any land, and especially upon that recently seeded with herds-grass. This grass, as is well known to all careful observers, has a bulbous root, and the fine fibers that shoot out from the bottom are not as strong as the roots of most other grasses. It is therefore exceedingly liable to be torn out by the roots by grazing cattle, especially if the grass is short. In a close cropped meadow, where this grass has been sown, nothing is more common than to see thousands of these dried bulbs lying upon the surface. We doubt the economy of grazing a herds-grass meadow at any time. But if done at all, it should not be cropped after the first of November, in this latitude.

The roots of all the grasses are designed to be covered with their own leaves and stalks during the Winter. These and the snow protect them from the alternate freezings and thawings, and bring them out in good condition in the Spring. The farmer who undertakes to thwart the designs of Nature in this respect, will find it very expensive business. The little that he saves in feed now, he loses the next season in the diminished yield of the pasture or the meadow. We ought always to manage so as to have Nature working with us, instead of against us. This is one of the evils of overstocking farms. The farmer is afraid that he has not quite fodder enough for Winter, so he pastures till the ground is frozen. He cuts less hay for it the next season, and he is still more sorely tempted to pasture late.

It is quite as bad for the cattle as it is for the land. If they have no fodder in the month of November, they lose rather than gain upon pasture, unless it is much better than the average. Every animal ought to go into the stable in a thriving condition—if not fat, at least in full flesh. They are then easily kept thriving upon good hay, or upon hay and roots, straw and meal. After several years' close observation directed to this particular point, we do not think any thing is gained by pasturing in this latitude, and north of it, after the first of this month. All the grasses must have time to cover their roots in order to make flush feed next season. Cattle foddered through a part of October and brought to the stable about the first of November, in good flesh, are easily wintered. It is better management to buy hay or to sell stock, than to pinch the pastures by close feeding. *

The Leaf Crop.

This very valuable crop is too often entirely overlooked. Multitudes of farmers have yet to gather their first leaf harvest. Gardeners very generally appreciate the value of this article, and where it is accessible, it enters into their most valuable composts. Most farmers are so situated that they can gather leaves in large quantities and would readily do it, if they knew how well it would pay.

Chemical analysis shows that the leaves of plants are rich in fertilizing matter, much richer than the wood. Eleven per cent of the leaves of the elm are ashes, while the wood only gives two per cent. Other trees show a still greater difference. The constant growth of forests even

upon poor land, is doubtless owing to the annual deposit of leaves upon the surface of the earth. These having drawn fertilizing matter from the subsoil through the roots, deposit it on the surface where it is available. Every one has noticed the rank growth of grass, where leaves have been burned or allowed to decay. They are valuable to the farmer for bedding before they go into the compost heap. Nothing is better for the sty or the stable, than a good leaf bed. The time of rustling leaves has come in the garden, upon the lawn, in the orchard, and in the forest. Let them be gathered as the last of the harvest.

For the American Agriculturist.

Save Cartage.

A man who has two yoke of cattle, or a span of horses, seldom stops to think of the expense of carting muck and handling manure. The ordinary route of muck, from the bed to the field where it is to be used, is through the stable or yard, and privy. This will, doubtless, have to be the course for a large part of it. But we can use profitably more muck than we can afford to cart in this way, which makes at least two extra handlings.

The writer is now carting a lot of ditch scrapings and muck, directly to the field where they are to be used for top dressing. It is put in heaps so near together, as to admit of easy spreading over the whole ground. During the Winter, as manure in the yard accumulates, it is carted out and mixed with these heaps of muck. It is made fine, and spread as soon as the frost is out of it in the Spring. The muck has the benefit of the freezing and thawing quite as much as it could in the yard; is ameliorated by the fresh manure, and makes an excellent top dressing. The same can be done in making compost heaps for corn, and other hoed crops. Use the strength of your teams to the best advantage and save cartage. CONNECTICUT.

Chess—Instructive Experiment.

Some persons go so far as to assert that all chess springs from wheat seed, and that chess itself is only a bastard wheat, which will not reproduce itself. Below is the result of an experiment which would seem to settle the question of reproduction. We have scores of letters on the chess question, and have, from necessity, decided not to publish more on this subject at present, as a general rule. The following letter may well form an exception:

To the Editor of the American Agriculturist:

I wrote you about a year ago, stating that I was conducting an experiment with wheat and chess, and that I expected to prove to you that wheat would produce both chess and wheat. I acted on the belief that chess was a mongrel wheat, which could be produced by stinting the wheat, and that this mongrel wheat, (chess,) would not reproduce itself. To prove my theory I turned under two plots of sod perfectly clean and free from weeds or seeds of any kind. On one plot I sowed clean Blue Stem Wheat, and on the other clean Chess seed. Both came up finely. Fowls were allowed a free range over the whole plot during Autumn and Spring, and they picked it off close to the ground. Then on the 1st of May I cut off the tops of the plants, and repeated the cutting just as the stooling commenced. But in spite of my strong faith that I should have some chess, it all came out pure wheat. On the plot seeded with chess

I had a splendid crop of pure chess, and chess only, which was fully matured by the first of July. D. T. WIELAND.

Center Co., Pa., Sept. 17, 1861.

Principles Regulating Breeding.

The following extract from a prize essay on the above subject, by Henry Tanner, Member of the Royal Agricultural Society of England, explains why so little success is attained in securing good stock from animals of high excellence:

"In the breeding of all varieties of farm-stock—cattle, sheep, pigs, etc.—the results seem uniformly to follow the same fixed but simple laws. It is an old and approved maxim that 'like produces like;' but this rule, though generally true, may be misapplied, when the error will be demonstrated by the contradictory evidence of practice and experience. If an animal is capable of transmitting any character to its offspring, it must possess that which it conveys, although at times qualities may predominate in the offspring, which were almost latent in the parent. If, therefore, any quality or character is rendered hereditary, it must correspond with that inherent in the parent from which it descended. If, however, I breed from a female possessing certain qualities, and a male distinguished by an opposite character, it is clear that the offspring can not perpetuate both of these characteristics, and the result appears antagonistic to the maxim that 'like produces like.' This brings us at once to the consideration of one of the most important principles connected with breeding, namely, that although 'like produces like,' (for it can produce nothing else), still, when the parents possess opposing qualities, the preponderance is exercised by that one which possesses the hereditary tendency in the greatest strength. If, for instance, a cow having any special peculiarity of form is put to a bull having the opposite character, the offspring will assume the character of that parent which possessed the greatest hereditary powers in this respect, or, in other words, the greatest purity and unity of influence. If these hereditary powers are under our control, it is important to consider by what means they may be increased or diminished.

"In breeding from a ram and ewe possessing a similarity of type, the produce of such a union will, of necessity, also possess the like character, but in a higher degree. Thus the result of breeding stock of similar character is that these peculiarities are not only perpetuated but intensified in the offspring. Provided that the parents possess similarity of type in any given particular, every successive generation thus produced acquires an increase of hereditary force, by which we mean the power of imprinting its own stamp upon its progeny. But in like manner as this power accumulates when there is a similarity of character, so also does it diminish when the parents have opposite or antagonistic characters. Suppose that a well-bred ram, by careful breeding through several successive generations, has acquired strong and valuable hereditary powers (which, for illustration sake, we will represent in figures), say equal to 100. If this animal be put to a ewe of a totally different character, say having hereditary power equal to 60, the result would be that the offspring would still possess the same character as the ram, because of his hereditary power; but the hereditary capability of the offspring would be reduced to say 100—60=40. Supposing the offspring to be a ram, at a subse-

quent period both the sire and offspring may appear equally perfectly in form and general character; but the power of hereditary transmission being so much greater in the sire than this offspring (in proportion of 100 to 40), the former would be far more valuable as a breeding animal, although the difference in the capabilities of the two would be entirely hidden or latent. If you breed from animals possessing a similarity of type, the offspring will possess the same character, but with a greater power for the hereditary transmission of this character. On the other hand, animals having opposite characters mutually weaken each other's influence, and the offspring only possess the power of hereditary transmission in a reduced degree.

This power of perpetuating character is not confined to any one quality, but it extends to every peculiarity of the animal, whether it be similarity of feature, configuration of the body, general habit of growth, disposition for fattening, the formation of milk, healthy constitution, predisposition to disease, temperament,—all are alike hereditary and are modified in their transmission by the mutual influence of the parents. It would appear as if every individual point of character were thus controlled and balanced according to the respective tendencies of the parents, and that the resultant character represented a series of balances, sometimes in favor of the male, at other times in favor of the female. The dam might succeed in communicating the general form to the body, but be unable to overcome the stronger power of the male over some certain portion of the body. The dam might be naturally deficient, for instance, in her hind-quarters and good in other parts, and under the influence of a sire having a powerful tendency to produce a good hind-quarter, she may be compelled to yield to his superior influence. In certain points of character, where they corresponded, the influence would be increased. In some particulars the dam might predominate, and in other respects the sire might be most influential. Thus the hereditary powers of carefully-bred stock will represent the maximum of good influences and a minimum of those which are undesirable."

Corns on Horses' Feet.

There may be in some animals a constitutional tendency to the growth of corns and other excrescences, but as a general rule, we believe they are caused by the unskillfulness of the blacksmith or the carelessness of the owner. Sometimes, the shoe is allowed to remain on the foot six weeks or two months, in which time it becomes imbedded in the hoof. Corns are sometimes caused by keeping a horse upon a dry stable floor, year in and out, using him but seldom on the soft, damp ground, and taking no pains to wet the hoofs and so keep them soft and pliable. Wherever it is possible, a horse should run at large in a pasture, several months of the year: this will promote his general health, and do more than anything else to keep his feet sound. But where this can not be done, care should be taken to moisten the hoof frequently, in the stable, or by use on the road.

The blacksmith has no little responsibility in producing corns. He sometimes draws the shoe in at the heel, and bevels it from without inwards. He cuts away the bars of the foot, and so weakens the quarters. All this is wrong. Keep the bars sound, and set the shoe level.

But when corns appear, what shall be done?

Remove the shoe, pare out the angle well between the bar and the crust, and apply a little warm tar to the tender spot. Youatt recommends "the butter of antimony." Saturate a piece of cotton wool with this liquid, and press it into the hole firmly, so that it will not soon be lost out. The design of this remedy is to stimulate the sole to the formation of new and healthy horn. Then, in shoeing, care should be taken to prevent friction on the tender part. Let the shoe be slightly bent off at the heel, so that it will not touch the hoof, and make the shoe so stiff that it will not bend down again under pressure. The shoe ought to be a little wider at the heel than before, and be slightly beveled from the last nail hole.

In ordinary cases, the above treatment will remedy the evil. But where it does not, after a trial of ten days or a fortnight, then remove the shoe and put on a "bar-shoe," chambered so as to take off pressure from the diseased spot. This, however, should not be worn longer than for two shoeings, as it would injure the frog and induce the growth of soft hoof at the heels. While trying the "bar-shoe," or the bent shoe before mentioned, fail not to keep the hoof soft by using the hoof-ointment sold by all horse-doctors for this purpose. After applying it several days, wash the foot clean with castile soap and water; then use it again.

Where the ointment can not be had, and where the foregoing remedies do not answer the purpose, take off the shoe, and dress the foot with a large bran poultice. But turning out to grass, wearing light shoes meanwhile, is perhaps better than ointments and poultices put together. We have found this to succeed, when all other remedies did but little good.

For the American Agriculturist.

A Good and Cheap Poultry House.

Having made some improvements on my farm this year, I will mention only one—the humblest, most original, and perhaps most economical of all—to wit: MY POULTRY HOUSE. It is built on seasoned white oak posts set in the ground 3 feet deep, is 8 feet high, 12x16 feet, with roof of usual pitch, and eaves projecting 3 feet. The gable ends and one foot on the sides are sheathed, with lattice windows in each gable end for light and air. The planks forming the sides of the house are planed on the inside only. They are set perpendicularly and rabbeted in, so that each plank can readily be slipped out after the first one on each side is taken out, these being secured by hooks on the inside. They are taken off occasionally, and washed with strong lye to destroy vermin, and then returned to their places. Next to the posts on which the frame rests, and below the rabbit or resting place for these upright boards, I have placed planks 12 inches wide, held in their places merely by wooden pins driven into the ground. The nests are placed against these planks, and covered by a wide plank, which also can readily be removed at pleasure. The nests are on the ground, separated by stones which project some little distance in front. The roosts are constructed of small saplings, which rest in notches in a plank on each side, that is nailed temporarily (tacked merely) to the frame, and these poles are 2 feet apart, and extend to the roof of the house at an angle of 60 degrees or thereabouts. There are four of these inclined planes of roosts. The door is at one of the ends of said house, and there is an opening on the side, near the top of the door, for

ingress and egress, with a suitable hen ladder both inside and out.

If the above description is understood, it is easy to explain the objects I had in view in this building. Cheapness and cleanliness were the main objects to be obtained. Being built of second rate lumber, without ornament of any kind, and merely jack-planed off on the inside, the first was accomplished. With the exception of the roof and gable ends, it can, in a few minutes, be taken down, the boards washed and replaced, by which means a most thorough cleansing can be obtained. The roosts, when foul, can be burnt, and new ones substituted. G. J.

Franklin Co., Missouri.

For the American Agriculturist.

The Wren and Bees.

The Wren is a valuable bird. It never does any harm, while it lives entirely upon insects, and is one of the most persevering, industrious, voracious and greedy little marauders that we know. I have a family of wrens quite domesticated; they come regularly every year, about the first of June, and leave about the first of September, with the progeny of the year. Several years ago I built three little houses for them, 2½ inches square, with a round entrance of 1½ inch; they have occupied them every year since, and no money would tempt me to part with my little russet songsters. All the day we are regaled with their merry songs; every morning and evening they are as fierce as hawks around my bee-hives, not a hive is missed, not a spot overlooked, every crack and cranny is explored, every bee-moth is dispatched, every dead young bee is carried off, and I consider my family of wrens of more value for the destruction of the bee-moth than all the lotions, mixtures, decoctions, and patent fly-traps ever invented.

Manlius, N. Y.

AGRICOLA.

The Army Worm and Draining.

At one of the discussions at the recent meeting of the New-York State Agricultural Society, Dr. Fitch, State Entomologist, gave a lecture on the Army Worm, in which he stated that it is not the cut worm, but strictly the larva of a grass moth, which ordinarily lurks in the wild grass of swamps. In very dry seasons the insect has unusual feeding range, which favors a rapid increase. If the succeeding season be very wet, the swamps are overflowed, and the insects are driven out among the crops, scattering their eggs over the country. In confirmation of this explanation of their sudden appearance in such numbers, Dr. F. stated that the year 1769 was dry, and 1770 wet, and the army worm was then very destructive. This also occurred in 1816 and 1817, and again in 1860 and 1861. During this last visitation it was observed that the worm did not make its way up along the Connecticut River as in 1770, because most of the marshy regions then are now drained. If this theory be correct, it gives an additional reason for draining swamps and marshes.

A CROWING MATCH.—A new sport has been inaugurated in France, viz: crowing matches between roosters. An account is given of a spirited contest between ten large fowls and ten of smaller breed. The Shanghais carried away the palm. We presume the quantity, and not the quality of the crowing was regarded, for the crowing of a Shanghai is about the loudest noise that can emanate from the poultry yard.



To the Editor of the American Agriculturist.

While at the Post Office last night, the Post-Master handed me your October number to look at. My eye first fell upon your exposure of Humbugs on page 296. As I had just sent \$5 to Geo. F. Humbug (Hamilton), for a ticket in the "Grand Social Banquet" at Holderness, N. H., I hurriedly looked into my pocket book, and found that I too had paid for ticket No. 3769. Three neighbors came in, and seeing me anxious about something, they looked over my shoulder at the article in the *Agriculturist*, and as it proved, they had each sent \$5 for Ticket No. 3768. The way we looked about that time, or at least the way we felt, I have tried to sketch with my pencil, as you see above. . . . As a precaution for the future, we have concluded to have the *Agriculturist* hereafter. I was urged to take it last year, but thought I could not afford it. I now see I could. Enclosed please find \$4 for the four names below—or above. Yours, etc.,

Barnstable Co., Mass., Oct. 14, 1861.

Small Humbugs—Recipe Peddlers.

Recipe peddlers are the vermin of the humbug tribe. It requires something of a genius to originate and successfully carry on a swindling lottery or gift enterprise, or some scheme requiring extensive advertising and general notoriety; but the recipe peddler can crawl about from house to house, almost unmolested, and like a predatory insect take a bite here and there to the great annoyance of his victims, but without exciting sufficient public notice to make his depredations hazardous. A man will usually suffer from a flea bite rather than be seen hunting for the insect, and in like manner, one who has been taken in by a petty swindler, generally prefers to keep quiet about it, rather than be laughed at; and thus these vermin are usually allowed to go unmolested. A few illustrations of the habits and practices of the tribe will be sufficient to guard the readers of the *American Agriculturist* from their inflictions.

The recipe peddler usually offers for sale the secret of making honey, or vinegar, or soap, or some other common household article, with little or no trouble, and at a very trifling cost. Frequently he exhibits professed samples of his manufacture. He goes industriously from house to house, never remaining in a place long enough for his recipes to be put to the test, and the deception exposed. Sometimes the directions given are good, but they could have been found in almost any recipe book, at one-tenth the price paid to the swindler. Quite often, however, the information imparted is entirely worthless. Here is a case in point: A subscriber lately paid fifty cents for the following soap recipe, which we copy verbatim:

One pound of Amoniacum, two pounds Rosin, one pint of Alcohol, one quart of Salt, one pound of Cooper's Isinglass, one peck of Corn Meal sifted (!) to eight gallons of Rainwater,

boiling when you put the preparation in. Then let it boil for five minutes, then set it off to cool. WILLIAM TAYLOR.

The peddler said this compound would make 100 lbs. of soap, at a cost of only one dollar. One half the required quantity was purchased for something over a dollar, and the directions duly followed. The result, as our informant says, was no more like soap than hasty pudding. It was good for nothing in the house; the pigs turned up their noses at it and ran away with a derisive squeal, and the whole was thrown on the manure heap. It would not be advisable for a recipe peddler to visit that house again, but the fifty cents was not entirely lost if the experience be heeded by the readers of the *American Agriculturist*.

A WORSE HUMBUG—SILVERING POWDERS.

To-day, (October 1st,) we were followed two blocks by a vagabond, who poured out the foulest profane language imaginable, and we were actually compelled to hand him

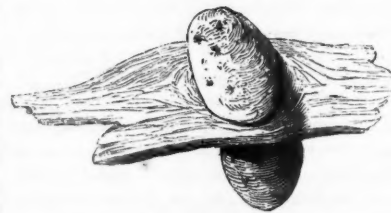
over to a policeman. Our offence was "interference in his business" in this "free country," where "every man had a right to follow whatever honest calling he chose." The gist of the matter was this: Passing the corner of Pearl and Fulton streets, we saw the fellow taking in the shillings at a rapid rate from a lot of poor women, who evidently had but few more left, and for what? Why a little box of a clay paste which was "warranted to beautifully coat with silver any article of copper, brass, german silver, etc." And in proof of the assertion, a little of it was rubbed upon a brass stair-rod, upon old fashioned copper pennies, and upon brassy spoons, and sure enough they did glisten with a brilliant silver lustre. Indignant at the deception, we ventured to tell the eager purchasers that the quicksilver, (mercury,) thus applied would last but a brief time, and, what was worse, it would eat into and spoil the surface of any kind of metal to which it would give the lustre.

Let us here warn the readers of the *American Agriculturist* that these silvering powders and fluids so frequently sold about the country by peddlers, and by ignorant or unprincipled merchants, are all of the same class. They will positively spoil the surface of copper, brass, german silver, or silver itself. Rub a few coatings upon a silver coin, and it will become as brittle as a pipe stem. They are either mixtures of quicksilver with colored clay or other material, or they are clear or colored solutions of quicksilver in nitric acid (aqua-fortis) diluted with water. Certain metals, such as copper, brass, silver, etc., reduce the quicksilver to its metallic state, and give a bright silvery lustre; but this will quickly tarnish, while the quicksilver will dissolve or eat into the metal itself, just as a drop of water will affect a lump of sugar. Fine emery or clay is useful to brighten surfaces of genuine silver, but there is no preparation that, without the aid of a galvanic battery, or heat, will give a coating of real silver. Strong heat

will expel (evaporate) quicksilver, and if the reader has been injudicious enough to use any of these so-called silvering powders or washes, the best thing to be done is to at once heat the article strongly to expel the last trace of the noxious mercury. Miners frequently triturate or beat up gold-bearing rocks or sand with quicksilver, which dissolves out the gold as water would dissolve out particles of salt. The sand particles float upon the heavy quicksilver, and are removed. The liquid is then heated strongly, which evaporates the quicksilver, leaving the pure gold in a mass, or in fine powder, to be melted together. Silver can be separated in the same way. The quicksilver escaping in the form of steam or vapor, is collected in cold receivers as it escapes, and is used over again and again. This explains why such large quantities of quicksilver are sent to California, and also why the discovery of quicksilver mines there increased the value of the gold mines.

Have You an Ice-House?

It can be made very cheaply, and when the luxury of ice in Summer is once enjoyed, it will not be readily given up. If no better structure can be erected, build an ice room in one corner of the wood house, or any shed where room can be spared. The north-east corner is best. Set a row of upright posts one foot from the inner sides of a building, and two rows of posts a foot apart, for the other two sides of the room; make the enclosure say eight or ten feet square. Cover these with rough boards or slabs, and fill the space between with spent tan bark. Lay down a loose floor, and cover a foot deep with straw. When ice is formed, select that which is pure, clear, and hard, cut it into pieces of convenient size, and pack it closely in the room. Leave six inches space between the ice and the sides of the room, and fill this with sawdust. Also cover with sawdust a foot thick, and fill up to the roof with straw. Packed in this way, ice enough to supply a family of average size has been kept safely, the season through.



A Vegetable Curiosity.

The above illustration represents a singular growth made by a potato, which was forwarded to the office of the *American Agriculturist* by Mr. George C. Hance, Middlesex Co., Conn. The tuber, while small, found its way into a knot hole in a piece of lath which lay near it, and as it grew, enlarged on each side of the hole, so that it can not now be withdrawn without breaking either the potato or the lath. A friend relates that he once saw a pumpkin in a somewhat similar "fix." It attempted to grow through a rail fence, but only half succeeded, and formed a double pumpkin, about half being on each side of the fence. Young gardeners might take a hint, from these samples, and produce amusing vegetable curiosities, by introducing young fruits into some vessel that will give them a singular shape; thus a melon might be forced to resemble a human head and face, etc.

Tim Bunker on Painting Buildings.

COST OF PAINTING—HINTS ON COLOR, ETC.—
STONE HOUSES—NEW ARGUMENT FOR
SHADE TREES.

MR. EDITOR: Cleanliness is said to be next to godliness. It certainly looks better to see a farmer's house and barn all nicely painted, and it makes the paying of the bills rather easier, to know that paint is the cheapest outside covering for all wooden buildings. So I am going to paint up, this Fall, notwithstanding the war. I rather guess I shall have something left to pay the bills, after the war taxes are paid. It is only five years ago that I painted up every thing I had on the farm, even to the ice house, and the pig sty, and I suppose they might now stand another year without much damage. But as I was coming home from Shadtown last week, Mrs. Bunker took occasion to remark that she thought the gable end of the house looked a little dingy and bare. At any rate, it did not look so well as Mr. Slocum's house, and she thought if a poor minister could afford to keep the parsonage in so neat trim, that Timothy Bunker could afford a new coat of paint.

Now I half expect she was joking, for she knew well enough that I had paid the bills for painting the Shadtown parsonage, because Josiah and Sally, being young folks, had enough other use for their money. I didn't say much, but I rather thought to myself, "guess Mrs. Bunker's getting jealous of her daughter."

But you see she is not going to have any occasion to think that an old bride is not just as good as a young one, though it is her own daughter, and all in the family. What made me more ready for painting was the fact that Jo. Dennis, the painter, was out of a job, complaining of the war, hard times, and nothing to do in his line. Now I like to see industrious people busy, earning money, and so I set Jo. at work.

I find I learn something about painting every time I do up the job. It requires from five to ten per cent of the first cost of a building every fifth or sixth year to keep it painted. This amounts to a heavy tax, such as we should think oppressive if it was imposed upon us by the Government. I have been thinking that a great many could save this expense by building with stone. In most parts of the country stones are plenty—granite, sand-stone, marble, that split easy, and are of handsome color. In many places, near good quarries, it would not cost any more to build of stone than of wood. Barns, and out-houses especially, might be made of stone, wholly or in part, to great advantage. Deacon Smith built a stone barn, ten years ago, and it keeps hay just as well as his old one, and has some advantages over wood. He claims that it is a great deal warmer in Winter, and of course it takes less fodder to carry his cattle through. It is cooler in Summer, and more comfortable for such animals as he keeps in the stable. It is more easily made rat-proof. The walls are made of split granite laid in mortar, and will never need any repair or paint in his day, or in that of his grand-children. The first cost was only a third more than wood, and he thinks the interest on this difference is more than made up in the saving of fodder, repairs, and paint.

We have a few stone houses in Hookertown, some of them the natural color of the granite, and some white washed, and they are the warmest and most comfortable houses among us. If I were going to build again, I should certainly use stone, for both house and barn.

But most of us have built of wood, and we must do the best we can with the houses we have. There is one good thing about it, we can change the color of our houses as often as we please, and come out in a new fashion, while the stone house maintains the same aspect. "What color are you going to put on?" asked Seth Twiggs, as he looked over the gate and mingled the smoke of his pipe with the steam of the boiling oil.

"It won't be blue I'll warrant you," said Jotham Sparrowgrass, without waiting for me to give neighbor Twiggs a civil reply.

"Guess it'll be horse color," observed Jake Frink, who still remembers the cured horse-pond, and thinks every thing I do must have a shade of horse in it.

When I was a boy, it wasn't much of a question as to what color a man would paint his house. I don't think there were a dozen houses in Hookertown of any other color than white. It was claimed that white was the natural color of the lead, it was the least trouble to make, and looked best in the country, where it was so easy to surround the house with trees and shrubs. I have always noticed in journeying, that the more green you have around a white house, the better it looks. In the last twenty years a great change has come over the taste of the people, and somehow they seem to paint other colors a good deal more than white; yellow, drab, light brown, lilac and grey. This may be owing somewhat to an improvement in taste, but I guess fashion has quite as much to do with it. A man paints his house to please his neighbors rather than himself, and if brown is the rage he paints brown. I am saved all trouble about the color, for Mrs. Bunker likes white and nothing else, so white it shall be. Our trees and shrubs have got so well grown, that white makes an agreeable contrast, and then it has always been white, and some of my friends might not know the house if it was any other color. The artists and architects make a good deal of fuss about blinds upon the outside, and the green color. But there is no substitute for a green Venetian blind upon the outside. It bars the heat, and lets in the breeze in Summer, and is always agreeable to the eye. Houses are built for comfort rather than for show, and I think comfort should be studied more than anything else. If we can make taste go along with it, that is so much clear gain.

It makes a good deal of difference about the season of painting. In the heat of Summer, the oil seems to strike all into the wood, and the lead washes off sooner. If I could have my choice of weather, I would select the clear days of Spring or Fall, with a north-west breeze, if any. Then, with good materials, the paint dries gradually, makes a good body, and will be a great deal more durable.

There is one thing I have just learned about painting, and it must be true as preaching. Paint upon a building well sheltered by trees, will last twice as long as paint in an exposed position. The gable end of the house, to which Mrs. Bunker called my attention, is almost bare, while the lower part has still a fair coat of paint. The reason is that the upper part of the house is fully exposed to the raking winds, while the lower part is partially protected by the barn and the shrubbery. On the west side of the house is a covered piazza. The paint sheltered by this, is almost as good as when it was first put on, five years ago. In violent storms the wind moves from forty to sixty miles an hour, and the rain is driven with this velocity against

the sides of the house. Of course, there must be a good deal of mechanical violence done by this continual battering of the rain drops. A friend, who has three sides of his house sheltered by trees, is of the opinion that a coat of paint will last twice as long as upon the fourth side, which is without any protection. Trees break off the winds, and are of as great advantage in preserving a house as they are in warming it in Winter. They should not stand too near a dwelling, so as to make it damp and unhealthy, but at a distance of thirty feet or more, they are a great comfort and ornament. In saving both paint and firewood, the evergreens have a great advantage over the deciduous trees. Their foliage is so thick and fine, that they break the force of the winds more completely, and sift out the cold.

This will be a new argument for planting trees around farm buildings, and one of the strongest that can be brought forward. A man will save enough in paint in five years, to pay for his trees and the cost of planting them.

Yours to command,

TIMOTHY BUNKER, Esq.

Hookertown, Oct. 10th, 1861.

For the American Agriculturist.

Give the Boys Tools.

Yes, give them tools—not merely the needful implements for cultivating the garden—but give them a few good carpenter's tools, with a bench on which to use them. Let their first attempt be upon a chest in which to keep the saw, hammer, bit-stock and bits, planes, square, rule, chisels, gimlets, awls, screw-driver, etc., with a separate hand box to set in, containing apartments for screws, and different sized nails, brads, etc. Let the middle partition of the box be a high board having a convenient handle cut out of the top to carry it by. The next attempt may be on a house or clothes chest, regularly dove-tailed together, and provided with a "till" in one or both ends. Our "blue chest" made while a small boy, will ever remain as one of the "household treasures." A hand-sled, set of trucks, or wheel-barrow will soon follow, after which some of the more useful farm implements, such as ax, hoe, or fork handles may readily be made, or sundry carpenter jobs attended to, such as putting new siding or shingles upon the house, setting glass, making and attaching water gutters to the eaves, etc. We could mention instances where persons without serving an apprenticeship, but with a fondness for and readiness in handling tools which frequent use begets, have constructed most of the implements upon the farm, not excepting the ox-cart and hay wagon. Others have built a barn, finished off rooms in the house, painted the buildings outside and inside, doing the work at a leisure time when there was little else requiring attention. Therefore we say again, give the boys a set of tools to amuse themselves with, and the money will be well invested. AN OLD BOY.

REMARKS.—All right; give the boys good tools, and a place to work in. But "Old Boy" puts them ahead too fast. Before setting them to work upon a tool chest, let them develop their skill by constructing all sorts of boyish toys, blocks, rude boats and ships, and sundry playthings. Let them begin as soon as they can handle the simplest tool without cutting their fingers. A gimlet and piece of board is about the best safe implement to start with. Early practice will develop mechanical skill and taste, which will be of great utility all through life.—Ed.

For the American Agriculturist.

A Cheap Cistern.

Two years ago the coming month, I dug a hole for a cistern, 9 feet deep—9 feet across at top, and 7 feet across two feet below the surface—this left a shoulder or breech into which I placed two timbers for beams, and on these plank for a covering immediately over the cistern. A mason plastered it with Rosendale hydraulic cement, directly on the earth. It has never been dry since four weeks after it was finished, and according to my figures, holds nearly 63 barrels. It is perfectly tight now, except the spout and man-hole. It has never leaked out nor in. No surface water can drain in, and had I known how cheap, and with how little trouble it could be made, I should have had one long before.

The cost was as follows:

1 bbl. Rosendale cement.....	\$4.00
1 day plastering and board.....	1.75
1½ day in digging and board.....	1.50
103 feet Lumber.....	1.03
My time, nails, etc.....	1.50
Total cost of Cistern.....	\$9.78

The sand was mixed with the cement—only as fast as used—2 parts of sand to 1 of cement. There are sixty feet of gutter to my house.

Fon du Lac Co., Wis.

JOHN C. BISHOP.

REMARKS.—The above cheap method of making cisterns is much used in this region, and they generally do well where there is a firm hard soil to plaster upon. When locust poles and flagstones to lay on them can be obtained for the covering, it may be placed two feet or more under ground. The locust timber will last a century. Red cedar is also pretty durable.—Ed.]

For the American Agriculturist.

Barn Cisterns.

I have had one in use for six years, and it has worked so well, and been so great a convenience, that I can safely recommend it as a good investment. The barn stands upon a side hill, the main entrance being upon the third story, the cattle stalls upon the second, and the cellar and pig sty upon the first. The cistern is upon the second story, in the rear of the cattle stalls, leaving room for a walk and root bins between. It is about sixteen feet square and will hold some three hundred barrels. The walls of the cellar on three sides were used for the walls of the cistern and the fourth wall was made of heavy stone, two feet thick laid in mortar, to stand the lateral pressure. The inside was thoroughly cemented. The barn floor above was also laid double, and cemented to prevent dust from falling into the cistern. There is a free circulation of air above the cistern walls, to prevent the rotting of the floor. A pipe and stopcock communicate with the feeding room, where pure soft water is always ready for the cattle. Four cows are kept in the stables during the foddering season, and a horse the year round. The supply of water has been uninterrupted, except for a day or two the present season, when the cistern was cleaned out, and coated anew with a wash of cement.

All the water that falls upon the roofs of the barn and adjacent sheds, is turned into the cistern by gutters and pipes. The whole original cost of the arrangement did not exceed forty dollars. The expense for repairs has not been a dollar, as nothing has been done, but the cleaning of a pipe and the cleaning of the cistern and the washing of the walls with cement.

This arrangement has several important advantages. The water that would otherwise go

into the yard, making it a mud hole in Winter, now goes into the cistern even in wet weather. It is a great nuisance to have cattle miring knee deep in mud in mid-winter.

The water which the cattle drink, is always of the best quality, sweet and clean. It may be fancy, but they seem to like it better than spring or brook water. The watering as well as the feeding is immediately under the eye of the owner, and he can make sure that the cattle have water every day in Winter, without the trouble of following them half a mile to a frozen brook, and cutting a hole in the ice.

It is better than a trough fed by a pipe in the yard, which is frozen much of the time in Winter, and is apt to be surrounded with ice, making it difficult for cattle to stand. It is a great disadvantage to cattle to give them water near the freezing point. It takes a certain portion of their food to raise the temperature of this water to the natural heat of the body.

As a rule it will be found quite as economical to have a cistern under the barn, as to bring in spring water from a distance. The outlay for lead pipe is large, and it is always liable to be frozen, or to get out of repair in other ways. If cattle are all stabled during the Winter, as they should be, the necessary roofing will furnish an abundant supply of water. If no spring is available, a cistern has still greater advantages. A water ram often involves a larger expense, and is much more liable to get out of repair. A cistern is available for all locations where there are neither springs nor running streams. If arranged upon the same floor with the cattle stalls, no pumping need be done. A small pipe will conduct the water into the stalls if it is desired, and by turning a stopcock the whole herd may be watered at once from a trough running through the mangers. Put down a barn cistern as among the first jobs for a leisure spell.

CONNECTICUT.

For the American Agriculturist.

Storing Roots for Winter.

As the season is now at hand when all root-crops should be safely housed for Winter, we call attention to the subject. That roots should enter largely into the diet of all sorts of stock, no intelligent farmer will deny. How to keep them sound in the best manner, and convenient of access, is the question now to be looked at.

Some persons having plenty of cellar-room under the dwelling-house, store them there. This is better than nothing; but such cellars are apt to be so warm and close, that the roots decay, filling the apartments above with unpleasant odors, and producing considerable waste. Whenever the house cellar is so used, it should be that portion the furthest removed from the heated rooms above. There should be small windows in the cellar walls, hung on hinges, or sliding, so that they can be opened and shut at pleasure. But this plan has the additional objection of requiring the roots to be carried daily from the house to the barn. This, especially in rainy weather and deep snows, is unpleasant and laborious. A better way, on many accounts, is to store the roots at the barn, where they are to be used. For doing this, several methods have been employed:

1. Dig a cellar for the barn, like that for the house. Give it suitable drainage from the walls, through an underground ditch. Lay up the stone walls in good lime mortar, pointing the whole so as to exclude frost and mice. The cellar

should be seven feet high in the clear. Ample provision should be made for ventilation through the windows, which should be of double sash or double glass, to exclude frost. The windows should be movable, so as to be easily opened or closed as desired.

A difference of opinion prevails as to the feasibility of stabling animals in cellars. If made dry, light, and airy, they answer for all animals excepting horses. For these we would prefer stables entirely above ground. Where the cellar is partly used for stabling, the following plan will answer: On one side of the basement—the lightest, driest, and most airy side—partition off a section for the cattle stalls; lath and plaster the dividing walls. These stalls will, of course, be made in such a manner as to contribute most to the health and comfort of the animals. The other section should be arranged for storing roots. On the sides of this room, tiers of shelves are to be put up, supported by scantling of sufficient strength. These shelves are to have narrow pieces of plank nailed on the front and sides, so as to make each shelf contain about six inches deep of roots. The design of such a tier of shelves is to prevent the roots lying together in dense masses, and so heating and rotting. Stored in this way, the air will circulate among the shelves, and reach every root.

To get the roots into this cellar, a door or large window must be provided, with a slide, leading from the outside into the store-room. After the roots are once unloaded on the bottom of the cellar, they can be sorted over and stacked upon the shelves, at leisure. This cellar should be kept as cool as possible without freezing. Carrots will bear a slight nip from old "Jack," and be little worse for it.

2. A slight modification of this plan, where quarry-stone are not abundant, is to lay up the walls with hard-burnt brick or cobblestones. If the region is very cold, and frost is not easily kept from such cellars, place the cattle stalls on the outer sides of the basement, and the root-cellar in the middle. (Horse-stables, it will be understood, are to be made above ground.) Special provision will need to be made for ventilating this mid-cellar. The roots can be conveniently dumped into their place through a shute in the outer wall, or through a trap-door in the floor overhead.

3. Hill-side barns are thought by some to be particularly favorable for storing roots. A correspondent in one of your cotemporaries, suggests the following plan, which is very good: "A barn 40 by 60 feet will hold four rows of cattle, containing fifteen head in a row, seven double stalls and one single one, allowing four feet for each animal. The two ends may be fitted up for cattle, and the middle apartment for sheep, with a root-house behind, 10 by 30 feet, or larger if desirable. This makes a very convenient and warm place for cattle and sheep, and a root-house holding 3,000 bushels. It may be enlarged to the length of the barn if necessary. The stalls should be on the sides of the barn, fifteen feet deep, heading toward the center. In front of the stalls may be passage-ways four feet wide, leading from the root-cellar, around the center space, from which the feed can be placed in the troughs on either side. Hay, straw, etc., can be put down through trap-doors, from the threshing-floor above."

4. But in many cases, the farm barn is already built, and without any provision made for cellar-room. In such case, a root-cellar can be constructed along side of the barn, on its most sheltered side. Dig a cellar and wall it up in a

substantial manner, as before directed. Put on the sills, and frame into them wide joists, at least six inches deep. Then put on a tight sheathing of boards on the under side of the joists, and fill up the spaces between with dry saw-dust or tan-bark, and cover the whole with a good flooring. Over this raise a roof. This double wall overhead and the roof will be quite sure to keep out frost. The little room or attic above, may be used for a general store-room of farm utensils, etc. From the cellar below, a doorway should open near the door of the barn, and the doors should be double, to be frost proof, one opening outward and one into the cellar. Ventilation can be had by running up a square wooden tube, six to ten inches diameter, from the middle of the cellar, to be closed when needful.

In a cellar like the foregoing, special care will need to be taken, to have the roots thoroughly dry when stored, and kept dry during Winter. An occasional turning over will be useful. If the roots are kept in bins, as some prefer, these should be made with wooden gratings in the bottom, raised about six inches above ground, to promote ventilation. In a cellar like this, or a common barn cellar, where frost inclines to enter, the tops of the bins or shelves should be covered in mid-winter, with a foot or two of straw.

5. But supposing a barn cellar of no description can well be had, then the roots must be pitted. Choose a dry part of the field for making the heaps. See that the roots are well dried before stacking. If there is any doubt about it, a very little quick lime should be sprinkled in the heap as it goes up. Each pile is to be about six feet broad at the base and four feet high. Cover with straw a foot thick, and six inches of soil. When mid-winter approaches, add eight or ten inches more of earth, pack it hard and smooth. Ventilation may be given to each heap by inserting half a bundle of straw vertically, like a chimney.

For the American Agriculturist.

Clear up the Highway.

One of the greatest trials to a neat and orderly man, is the practice of obstructing the public roads, in various ways. This is sometimes done from mere shiftlessness, and sometimes from stinginess—a desire to get as much as possible out of the public. During the coming Winter, we shall see piles of wood stretching along the side-walk, and often tumbling down upon it; also stacks of boards in the same precarious condition. Opposite a certain man's premises, we constantly see fragments of old carts, sleds, and barrels, rotten logs, heaps of brush and other nuisances. And this man can not see any impropriety in this conduct. Is not the land his own—to the middle of the road?

Now, to say nothing about the looks of the thing, streets so encumbered are unsafe. Many horses take fright at such "pokerish objects," and become ungovernable. Every man, probably, must have piles of rubbish somewhere, but let them be within his own gates, and as much as possible out of sight.

The roads are often obstructed by roving cattle. It may have been allowable for cattle to roam at large in the early settlement of the country; it may be still at the far West; but now in the older settlements, where farms are fenced, and where those who do not own land can get pasturage by honestly paying for it, there is no excuse for sponging it out of the public. There is more harm done now-a-days by trespassing cattle, than in earlier times. Rich grain-fields,

meadows, gardens, lawns—all brought into their present state by hard labor and at great cost—are exposed to destruction by a single unruly beast. In the street, hogs root up the grass by the road side, and befoul the sidewalks. They, with the cows, rub down newly-planted shade trees; they soil neatly painted fences and buildings; and they are a constant occasion of fright to women and children. And then, if a gate happen to be left open, or if a board happen to get broken from the fence, these hungry creatures are sure to find it out. The harm that follows, who can describe? It is not alone the corn-fields which the half-famished herd trample down, nor the ornamental trees, flowers, and shrubs, which they destroy—though this is enough to exhaust the patience of Job—but it is the alienation and bitterness of feeling between neighbors which ensue, followed up, perhaps, by a law-suit which costs the trespasser more than it would to have decently hired his stock pastured the whole Summer.

Quiet and peaceable people don't like to be continually scolding and quarreling with their trespassing neighbors. If they endeavor to get amends for injuries received, they may expect some kind of barbarous retaliation; and yet, if they quietly submit to abuse, the abuse will be increased. We have only to add, that this and all similar modes of obstructing the highway, are gross misdemeanors; they show a disposition to trespass on the rights of others; they are outrages upon society in which no one can persist and claim to be a good citizen. SUFFERER.

County and Village Lectures this Winter.

In these war times, all unnecessary expenses must be avoided; and among these, the fashionable Lectures which cost from fifty to a hundred dollars the hour. Such extravagant entertainments may be indulged in at other times, but not now. We want plain, substantial food. We need something to relieve our minds occasionally, from the sad and stern realities of civil strife and bloodshed, but it should be something reasonable in its cost and in its character. Not wholly insensible are we to the attractions of wit and learning and lofty eloquence, but in these sober days, something plainer and more quiet conforms nearer to our taste and feelings.

Accordingly, we suggest that when our village and country friends organize lyceums or associations for lectures and debates, for this Winter at least, *the speakers all be home-made*. The clergy, lawyers, and physicians of the town, should not indeed be excluded, but the main dependence should not be upon them. Farmers, intelligent mechanics, merchants, and business men of all kinds should be drafted into the service. Let each man lecture on the subject he is most familiar with, and in which he feels the deepest interest. Farmers have at hand a thousand topics, attractive and instructive to every body. Mechanics can discourse of implements, of materials, of construction, of inventions and improvements in various handicrafts. Merchants can enlighten us upon the laws of trade, upon production and consumption, and the like. The learned professions may be looked to for filling the gaps in the Course of Lectures.

Doubtless, the first and leading objection to this plan will be that the speakers proposed *can not speak*. What if they can't, then let them *talk*. Fine writing, and carefully-practiced elocution are not asked for. We want information on practical subjects; and we want it from men whom we know and have confidence in. And

besides, the call upon such men for lectures and debates will benefit *them*. It will incite them to reading and thinking, and perhaps to writing. It will teach them to arrange their thoughts in logical order, and to present them in some suitable manner.

What a happy influence such a system would have upon a neighborhood, if it were once heartily engaged in! The dormant talent which so many of our plain men possess, would be developed and aroused to action. Instead of spending their evenings and rainy days at stores, saloons, or other lounging-places, they would be seen poring over books from the village libraries at home, preparing for their lectures or talks. Their conversation would oftener turn upon subjects of practical importance, and less frequently on neighborhood gossip. The children and young people would be occupied less with vicious or foolish amusements, and many a child of talent would be inspired with impulses for self improvement that would ere long place him on the high road to fame.

Farmers' Libraries.

Having frequently urged the organization of Farmers' Clubs, we now recommend the formation of Libraries for the same persons. If one wishes to inform himself well on the various topics which come up before such a Club, he must have books. Tradition, hearsay, and partial experience are not enough. He should be able to go to the bottom of every subject, to understand its theory, its history, and the conclusions to which science and wide experiment lead. These things can be best got from books.

But every farmer can not be expected to own all the books necessary for such investigations: he can not afford it. The only way, therefore, is for the agriculturists of a neighborhood to club together and buy a library by subscription, to be their joint property. Our school-district libraries generally contain a few volumes on husbandry, which answer well as far as they go, but they do not cover the whole ground. We want several encyclopædias of agriculture, books for immediate reference, giving the gist of a subject in a very few paragraphs. Then we want scientific treatises on particular subjects, which go thoroughly and fully into all the branches of a topic. For instance, who does not like to "dip" at times into such books as Johnson's *Encyclopædia of Agriculture*, and at other times, to take long draughts out of such books as Lindley on *Horticulture*, French on *Farm Drainage*, Downing on *Fruits*, Youatt on the *Horse*, etc., etc. There is a long list of such excellent books, which every farmer and gardener would like to read, though he might not expect to own them all.

We repeat, then, that the way to get the use of such works is to form stock companies of some kind, and purchase them by subscription. Farmers' Clubs might lay an annual tax of one or two dollars on each member, to be used in buying books, and in subscriptions to standard periodicals. These books and papers should be kept at some central and convenient point, and be drawn out, subject to certain rules.

Does any body object to this plan on account of its expensiveness? Such contributions will, in the long run, fill the purse faster than they drain it. Their good effects will be seen in improved fences, buildings, stocks, and crops. They will appear, too, in the zeal, intelligence, economy and enterprize with which the farmer will pursue the labors of his calling.



AMERICAN FARM SCENES—AUTUMN—FROM AN ORIGINAL SKETCH BY F. O. C. DARLEY.
(Engraved for the American Agriculturist.)

The above engraving completes the series of American Farm Scenes, by Darley, illustrating the four Seasons, three of which have already appeared in our columns during the present year. The scene represents the closing triumph of the farmer's year. True, it has none of the pomp and clangor which attend success in other arenas, but it is none the less a triumph. The golden spoils of victory are being gathered, and the whole household are present to share the pleasure. The principal figure in the group, the old man, is suggestive of the Autumn of life. He, too, is ripening for the final harvest. The confiding children that surround him show that the kindly influences which attend rural life have not been lost upon him. He is meHow at heart, though weather-beaten and hard-handed. A few features of the engraving are open to criticism, especially the position of the driver on the wrong side of his team, but some license must be granted to the artist, who placed the figures so as to give the best general effect. As previously stated, the originals, from which these four engravings are copied, are fine specimens of lithography, of large size, and will be a beautiful and appropriate ornament to the farmer's parlor. They are copyrighted and published by M. Knedler, from whom we obtained the right to engrave them. We can procure the large lithographs for those who may wish, upon receipt of the price, \$5 for the set.

RIGHTS OF GLEANERS IN FRANCE.—The court of highest jurisdiction in France has recently decided that in that country a farmer

has no right to turn sheep into his own fields until two days after crops have been taken off, so that the poor may enter and glean the scatterings. Neither has a farmer a right to let out the privilege of gleaning for payment. This law applies to vineyards as well as grain fields.

Helps to Agriculture Needed.

SUGGESTIONS TO INVENTORS.

Since the benefits of deep tillage and thorough pulverization of the soil have been recognized, it has become apparent that some new implement is needed in place of the plow. With the latter it is impracticable to reach the required depth without great expenditure of animal power, and the work of pulverization is only half performed. Below the line reached by the plow, particularly in clayey soils, there is left a solid compacted surface almost impenetrable by the roots of plants, and almost impervious to air; and this is made worse by each successive plowing. An implement is needed, to be worked by horse or ox power, that shall at one operation invert the surface growth, stir the soil deeply, and not make the subsoil still more dense. The invention of a successful apparatus of this kind will bring a large fortune to somebody.

There is greatly needed some system by which the waste manure of cities may be made available. It is calculated that each living being produces manure enough to sustain plants sufficient to supply it with food. This is partially true only. The excrement of an animal, added as

far as it would extend, upon a soil of average good quality, would probably increase its product enough to nearly supply food for the animal in the increase of the crop. At any rate, if the fertilizing material of cities which now is only a nuisance, difficult of abatement, could be brought within reach of cultivators, their land would speedily be raised to much greater productiveness. Who will originate some practicable scheme to this end?

Cheap portable farm buildings, which might be easily carried to distant points and readily erected, would be of incalculable benefit in new settlements, especially upon the prairies where timber is scarce. A combination of iron and wood may be devised which will answer this end, and give at least temporary shelter to thousands of animals that are now of little profit to their owners for want of buildings. Let inventors make a note of these suggestions, and improve their fortunes and at the same time the agriculture of the country.

For the American Agriculturist.

Convenient Grain Measurer.

The number of bushels contained in a bin or box may be found by multiplying together the length, breadth and depth in inches, and dividing the product by 2150.42, the number of cubic inches in a bushel. A convenient measurer for grain in the bin may be made thus. Take a straight rule, of any desired width and thickness, and 12½ inches in length, which very nearly equals the length of one side of a cubical

box containing one bushel. Divide this rule into 10 equal parts, marking them plainly, as inches are marked on a pocket rule. Subdivide the spaces each into tenths: these divisions will represent tenths and hundredths of the scale, and in measuring will be considered as decimals of a bushel. To use this rule, measure with it the length, breadth, and depth of the bin, multiplying together the dimensions given by the scale, and the product will be bushels and decimals of a bushel: Thus a bin measuring by the scale 8.5 in length, 6 in width, and 4.5 in depth, will contain 229.5 bushels. This measure (12 $\frac{1}{2}$ or 12.9075 inches) is not perfectly exact, but near enough for all practical purposes; as in buying and selling grain, it is usually weighed or measured by the standard. J. W. B.

"Land-Poor."

This expression is well understood at the West, where at present it is almost impossible to sell land except at enormous sacrifices, and where if held, it is burdened with heavy taxes. It is a common proverb, in such cases, that "the more land a man owns, the poorer he is." But there are land-poor men everywhere. They are those whose farms pay only a fraction of the interest on their cost. They are those who are carrying on some grand system of agriculture, which, though very splendid and imposing to spectators, does not yield a profit on the money and labor invested; for, that only is the best farming which renders the greatest proceeds from the least toil and expense. It does not avail us to be able to show great crops, if meanwhile the cost of producing them is proportionably great. Gentlemen of fortune can amuse themselves with such fancy-farming, if they like, but ordinary farmers can not. The grand thing to be aimed at, is to increase the productiveness of our lands, faster than we increase the cost of working them.

It is often a great mistake for one to enlarge his farm. It gratifies a man's pride to be known as a large landholder; and it is a source of much satisfaction to look out over one's broad acres, and to walk across them, and to gather in their teeming crops. But not everybody is able to own such a luxury. Increase of land brings increase of taxes, labor and care. Seldom is it wise to run into debt for much land. By no means wise, unless one is quite sure to raise enough from it to pay the increased taxes, interest money and labor. Let Naboth's vineyard alone.

Keeping Apples in Germany—An American Fruit Cellar.

John Rossbach, Essex Co., N. J., writes to the *American Agriculturist* that he formerly superintended a large orchard in Germany, where the fruit was kept as follows: A large cellar was provided, seven feet in depth, half of it being built above ground. The walls were 2 $\frac{1}{2}$ feet thick, and 12 windows were made; shelves, 2 feet wide, and one foot apart, were erected around this room and through the center, leaving passages to walk between. The fruit was all picked carefully by hand, and placed in single layers on the shelves. Except in freezing weather the windows were left open, and during severe cold they were covered with straw. All decaying apples were removed at once, being readily detected as they lay upon the shelves. The fruit kept in good order until late in Spring.

REMARKS.—This is an excellent method, if not

the very best one for preserving apples well all through the Winter and Spring. We began a similar practice twenty five years ago, and succeeded well in the colder latitude of 43°. The cellar then constructed, and still in use, is arranged as follows: It is 8 feet high, well drained, and free from dampness—the walls being laid in mortar, well plastered on the inside, and the floor made as solid and dry as stone by a coat of hydraulic mortar. The windows are hung on hinges, and are double glazed—glass on the outer and inner sides of the sashes. Frost is kept out, but the windows are always open except in the coldest weather. The cellar is divided into two distinct apartments. The warmer one under the constantly heated kitchen and living room, is devoted to potatoes, root crops, and general family use. The other one, the fruit cellar, is kept down nearly to the freezing point. The fruit shelves are arranged around the outside, near the walls, and in tiers across the middle portions of the room. Posts or scantlings are set up in pairs—the pairs being six feet apart, and the posts 2 $\frac{1}{2}$ feet from each other. Cross pieces for holding the shelves are nailed across the uprights—one 8 inches from the ground, the next 18 inches above the first, the next as much higher, there being 4 shelves in each tier, arranged like berths in a ship or canal boat. Narrow boards are laid on for shelves, with large cracks between them to admit a free circulation of air. Narrow side pieces keep the fruit from falling off. The outside tiers of shelves are far enough from the walls to allow a passage way. The apples are carefully placed on the shelves, two to four deep, according to their abundance. Beginning at one end the fruit is sorted over every eight or ten days, and any apple slightly diseased or injured is thrown out. The apples thus placed on these shelves, and in a constantly cool dry atmosphere, keep sound for many months. For smaller quantities, fewer shelves will be needed, but the cellar should always be kept cool and airy, whatever the quantity of fruit stored.—Ed.]

For the *American Agriculturist*.

Apples Preserved in Sawdust.

MR. EDITOR: The inquiry of one of your subscribers, in the Sept. *Agriculturist*, concerning the packing of apples in dry leaves, reminds me of an experiment I made many years since, which may throw some light on that subject. I packed them in dry hard-wood sawdust, taken from a cabinet shop; placed them in a cold, open garret, intending to remove them to a warmer place before cold weather; but forgot them till the coldest month, January, was past.

Thinking that they were then frozen of course, I did not meddle with them till Spring. On opening them, I found a few, not more than one in a dozen, entirely decayed, not a speck of sound tissue in them, and almost as dry as dried fruit, appearing much like it, excepting the dark color; while all the others were in a state of perfect preservation. From the fact that the decayed ones were wholly decayed, and that there were none half rotten and half sound, I concluded that those which were rotten, must have been imperfect at the time of packing, that they had probably received a slight bruise, by which the tissue was broken, and incipient decay commenced. Another conclusion was, that the fine sawdust, made with a circular saw from highly seasoned wood, was so good an absorbent, that it took up all the moisture from the decayed apples and held it fast, communicating

none to those that were lying near them.

But why were not these apples frozen? Or had they been frozen, and thawed so very gradually as not to injure their texture? The thermometer, that Winter, had been down to zero many times; and in one "cold spell" it had been in the neighborhood of zero for more than a week. My impression from that experiment was, that if apples be put into fine, perfectly dry sawdust, and kept in a cold place, those which are sound throughout when packed, will remain so until Spring, and that those which decay from any imperfection at the time of packing, will not communicate dampness, in any hurtful degree, to their neighbors, provided not more than a bushel and a half be put into a barrel, and the remaining space be occupied by the sawdust. Coldness, (not as severe as in the case above,) and dryness should, I think, be recommended as the requisites for preserving apples and other fruits. For securing dryness, some other absorbent, (to take up the moisture from such as decay from imperfection or injury,) might be as good as sawdust; but I doubt whether leaves would, and whether any thing else would, which could be so cheaply obtained. J. A. N.

REMARKS.—It is dangerous to allow apples to freeze under any circumstances. Some varieties occasionally remain sound when both the freezing and the thawing are very slow. In the above instance, probably the sawdust and the partial protection of the garret, together prevented severe freezing—sawdust of the kind described is quite as poor a conductor of heat, as are the best woolen garments. Mr. J. A. N. does not seem to have had much faith in the method, accidentally successful many years ago, or doubtless he would have followed it up himself, and been able to give the results of further and more recent experience.—Ed.]

A Hint or Two for Tree-Lovers.

Those who love trees for their beauty, will be pleased with the following paragraph which we have just met, and copy from a rare volume:

"A careful and eloquent observer of Nature describes the leaf as a sudden expansion of the stem that bore it; an untrollable expression of delight on the part of the twig, that Spring has come, shown in a fountain-like exaltation of its tender green heart into the air. And to hold this joy, Nature moulds the leaves as vases into the most diverse and fantastic shapes—of eggs and hearts, and circles, of lances and wedges and arrows and shields. She cleaves, and parts, and notches them in the most cunning ways, combines their blades into subtle and complicated varieties, and scollops their edges and points into patterns that involve seemingly every possible angle and line of grace."

And this reminds us of a hint derived from a recent botanical authority, on the natural and proper training of trees. He maintains that a leaf with a leaf-stalk, implies that the tree to which it belongs has naturally a bare trunk for a certain distance; but that a leaf without a stalk shows that its parent tree is naturally branched from the ground. He also shows that there is a correspondence between the disposition and distribution of the branches of the trees.

If the first of these points is true, it shows that evergreens should be trained with their lower branches reaching to the ground; and that the practice of hewing them off is unnatural and absurd. Whether this principle does not also apply to some deciduous trees, we have not yet examined. It is worthy of observation.

For the American Agriculturist.

How I Raise Grapes—Grapes in Cities and Villages—Farmers Read.

It is surprising, Mr. Editor, that so few farmers raise grapes, even for home use. *The American Agriculturist* has said a good deal on the subject, but not enough yet, I find; for only last week some of my friends living on a farm of 100 acres were in ecstasies over a nice basket of grapes, received from my three-year old vines growing on a city lot of only 25 by 75 feet, and having only 20 feet square for a garden. They had grown no such luxury, and yet they subscribe for the *Agriculturist*! The fact is, they confessed that they had always skipped over all the grape articles as something for amateurs or horticulturists, and not for farmers. I showed them how easy it is to get good grapes in abundance, and at little cost and trouble, and they at once decided to put out a few vines without further delay. They thought I ought to tell the readers of the *Agriculturist* just what I told them; so here it is:

Three years ago last Spring I built, at odd hours, a rude frame-work against the south-west side of my house, which answered not only as a trellis for grape-vines, but also as a screen against the sun on hot afternoons, when covered with foliage. Six posts, six feet above the ground, were set five feet apart, and ten feet from the house. Strips were nailed across, and small rafters run from the tops of the posts slanting up against the side of the house, with strips across them also. Such a frame work, though convenient, is not necessary, as the vines may be trained up against the side of a house, or on a fence, or almost anywhere else that any thing can be found for them to run on.

Now for the vines. Four holes, 3 feet across, and 3 feet deep, were dug at the outside of the frame, and one at each corner of the house. These holes were filled with good surface soil obtained from the top soil of a cellar being dug near by. Some bones from the butcher's, and some chip manure from the wood shed were mixed in with the soil; also a barrow load to each hole of well-rotted manure—the sweepings from a livery stable near at hand. A moderate quantity of soap suds and dish water applied from time to time since, is all the fertilizers given. After the holes were dug and filled as above described, I obtained six Isabella grape vines, two years old, and well rooted, at a cost of 37½ cents each. These were carefully set, spreading the roots. The first year about six feet of vines were made. In Autumn I cut them down to within two feet of the ground. The next Spring a single shoot from the bottom eye of each stalk was trained up the frame, and grew about 12 feet. About 4 feet of the tops were cut off in Autumn, and the remaining 8 feet simply laid down upon the ground at the bottom of the trellis, out of the way.

In the Spring, when the buds began to swell, the canes were tied up on the frame or trellis. All the eyes sent out one or more side bearing shoots, but where more than one shoot started from the same eye, it was rubbed off. The others mostly set fruit, of which only one cluster nearest the main stem was allowed to grow on the same side shoot. When the fruit was about the size of peas, I stopped the further growth of the side shoots by pinching them off two leaves beyond the cluster. The result was, fine large bunches of grapes along the whole of the 8 feet of the previous year's growth. In the

mean time the vines extended upward over the trellis, and enough side shoots were allowed to grow to partly cover the trellis or frame. In November I cut off about 2 feet of the ends of the main stems, and of the leading side shoots. The bearing side shoots were cut back to one bud from the main stem. The whole vines were then coiled up and laid down for Winter on the ground. In Spring the vines were tied up, and the same course pursued with the main stems and branches as with the main stems last year. This year I have had about 15 pounds of fine grapes on each vine. If all had grown without pinching off, I should have had 50 pounds to the vine, but I am seeking to get good strong healthy vines. The two crops have paid all trouble and cost thus far, and I shall hereafter have a large crop annually, with little further care or expense.

CIVIS.

Tilling Orchard Lands.

It is doubtless well to cultivate the ground in which young orchards stand. By this, we mean that the land is to be manured and worked, as well as cropped. It is supposed, also, that in plowing great pains is taken to guard against barking the young trees by the whiffle-tree, or having them gnawed or broken down by horses. But when the trees have arrived at bearing age, it is better to suspend plowing among the roots. The loss will be greater than the gain, for it is impossible to avoid loosening and breaking the roots; and if this be done, it is sure to engender disease, stint the growth, and lead to premature decay. When an old orchard, having long stood in sod, gets napping, moss-grown, and scantily fruitful, the best way is to scarify the surface with a harrow, and afterward apply a good dressing of manure.

Wounds in Trees.

The best way to manage them is to trim the edges smooth with a sharp knife, and then apply grafting wax, or clay, or dissolved shellac. The latter we have used for many years, and value it highly. Get about four ounces of the gum at an apothecary's, break it up fine, and put it in a bottle. Then pour in a quart of alcohol, and shake the whole vigorously together. It will be of the consistence of cream, and may then be applied with a brush. It soon hardens, and forms a varnish which protects the wound from air and moisture, and permits the bark to heal over before the wood beneath has decayed at all. Whenever a tree is pruned, all limbs larger than one's finger should be at once covered with this or some similar preparation.

Feeding Trees.

A friend asks what he shall do to make his lawn trees grow more vigorously. They have been ten years planted, yet do not grow as rapidly as they ought, and the foliage does not look bright and green.

For all ordinary purposes, it is sufficient to spread old manure on the surface of the ground over the roots in the Fall of the year, raking off the coarser parts in the Spring. A large part of the virtue of the manure will find its way into the soil between November and May.

But where this does not suffice, one can adopt the plan often employed by arboriculturists in Europe, viz.: of feeding the trees in trenches. It is, substantially, as follows: Ascertain by a

little examination where the main roots of a tree lie, and, having followed each one out to its extremities, open trenches there, say two feet wide, throw out the poor soil, and fill its place with rich virgin mold from an old pasture. Or any common garden soil will do, enriched, perhaps, with a little old manure. Fill up the trenches, and cover the same with the sods first taken off. In doing this, however, great care will need be taken, to avoid mangling the small fibers. Better not undertake the work at all, if it can not be done leisurely and carefully. Where the operation has been well performed in the writer's own grounds, the trees so treated have started into fresh luxuriance, making rapid growth of wood, and putting on new richness and beauty of foliage.

Making the Kitchen and Fruit Garden Ready for Winter.

1. This is the great month for pruning grape-vines. Do you prefer the *spur method*? Then cut back the laterals to two buds. One bud would be enough to leave, were it not possible that the Winter would kill it, and so leave you nothing to depend on. If the canes have been spurred many years, and lost a good portion of their eyes, it will be well to cut down a part of them every year, and train up new canes, until the whole vine is renovated. Or, perhaps you prefer the *renewal mode*? Then cut down all the canes that bore fruit the present year, and train up the new canes of this year's growth. Distribute the canes as evenly as possible over the trellis. When the pruning is done, let the vines rest for ten days or so, and then lay them down for the Winter. All tender grape-vines should be loosened from their trellises, laid on the ground, and covered with a few inches of soil. Fasten them to the ground with short stakes, or a few old boards laid over them carefully, so as not to break the canes or injure the buds. Use no straw in covering them, as it is apt to attract mice. If you have some of the newer varieties which it would be desirable to propagate, now is the time to save the trimmings taken off in the Fall pruning. Cut them into pieces a foot or eighteen inches long, with two or three buds on each. Lay them away in moist sand in the coldest corner of your cellar; or they may be buried a foot deep in the driest part of the garden. In Spring, the ends of the cuttings will be firmly calloused over, and will emit roots at once.

2. Raspberries should now go into their winter quarters. Bend the canes carefully to the ground, fasten them there with short stakes, throw on a light dressing of garden litter, such as carrot and beet tops, or old tomato and potato vines, then put on a covering of common soil two or three inches thick. They will come out in Spring with every bud fresh to the tips.

3. Strawberry vines will sometimes winter well without any artificial protection, especially if snow lies on the ground all through the cold season. But to make sure work, the best way is to cover the vines on the approach of cold weather. Some use spent tan-bark or saw-dust; others use leaves, preventing their blowing off by the winds, by laying a little brush upon them; others use long manure from the barnyard. We have tried each of these methods successfully, but prefer the tan-bark when it can be obtained. Where this is used, a part of it should be removed on the opening of Spring.

4. If there are rows of dwarf pears in some

of the borders, let them receive a top-dressing of old manure, say two inches thick. Then, lay two or three shovelfuls of common soil on the top of this, immediately around the trunk of each tree, to protect the bark from mice. The dirt is to be thrown off in the Spring, and the manure to be forked in among the roots.

5. It is taken for granted that all vegetables are now safely housed,—beets, onions, cabbage, cauliflowers, potatoes, carrots, celery, turnips—what a goodly show of comfort they make in one's cellar!

6. Now gather up all foul stuff from every nook and corner of the garden, and make a final bonfire. Be sure to include all weeds with their seeds in the burning. When this is done, then, as a final work, throw the whole ground into ridges with the spade. One year, let the ridges run east and west; another year, lay them off north and south. Take pains each Fall, to throw up more or less of the subsoil on the top of the ridges, that it may be disintegrated by the frost. In the Spring, these ridges are to be leveled. It will be found that where this practice is followed, the ground becomes dry and warm early in the Spring, the soil is gradually deepened and ameliorated, and vermin and noxious weeds are killed out. This practice is more important on stiff clay lands, than on light, sandy loams.

Planting Potatoes in Autumn.

A writer in the Rural Economist recommends to plant potatoes in Autumn in order to have them early the next season. He directs to dig the ground thoroughly, mixing in a liberal application of old manure. Select good sound potatoes of medium size, which are to be planted whole. Provide a dibble of hard wood, one and a half inches thick, with a blunt point, and having a cross piece about six inches from the end to regulate the depth of planting. Make the holes in rows three feet apart, and nine inches distant in the row. Drop a potato into each opening, and press the earth upon it with the dibble. Let this be done early in November, and before hard frosts. Give the land a heavy dressing with long manure, which may be removed early in Spring. As soon as the sprouts appear, fork up the bed between the rows. As the sprouts grow, pull them out so as to leave not more than three to each plant. In this way it is said very early potatoes may be had. [This may do in a mild climate.—Ed.]

Harvest the Roots.

The root crops being the last to be taken from the garden, are often neglected until injured by hard frosts. Beets are easily spoiled by having their crowns frozen, which will cause them to decay early. If they are not already secured, take them in at once. Carrots may remain a little longer if desirable, except the white variety, which is more tender and should be cared for early. There is little to be gained by leaving either variety in the open ground after Nov. 1st, as little or no growth is made. Turnips are very hardy, and may be left until the middle or last of the month; they will gain considerably in growth if the weather remain mild. Parsneps and Salsafy or Oyster Plant, are improved in flavor by being left in the open ground until Spring. The action of frost converts part of their starch into sugar. A few may be taken into the cellar for occasional use through the Winter. If this be done, keep them

buried in sand. Dig also a few roots of horse-radish and keep them in sand; they will be ready for use much earlier in Spring than they can be dug from the open ground in the garden.

All roots should be kept dry and cool. If stored in the house cellar, let the bins be removed as far as may be from under the rooms where fire is most used. A ventilator should pass from the root cellar to the chimney flue, or to the upper part of the building, and thence to the open air, to carry off the moisture escaping from the roots. This precaution will in some cases prevent frost. A friend informed us that he had always banked up his cellar to keep out frost, but seldom fully succeeded. One Winter, having neglected it, the frost did not enter, although the cold was intense. The crevices had afforded ventilation, and the roots had been kept dry. Avoid all bruising of the roots, and after they are stored, examine them frequently to remove any decaying. Other suggestions on storing roots may be found on page 334.

Keeping Winter Squashes.

First in importance, they should be well ripened before harvesting. This will occur in nearly all the Northern States, by the first of October. They should be picked before hard frosts have injured the rind; and the gathering should be done in the middle of a dry day. For a month or more after being harvested, they may be kept in a barn or other out-building, not laid in large heaps to accumulate moisture and heat, but spread on the floor, a little straw being laid under them to prevent bruising. On cold nights, late in October and during the first of November, cover them with a little straw. When there is real danger of freezing, carry them into the cellar for the Winter.

But there is a great difference in cellars. One that is warm and damp, is a poor place to preserve any sort of fruits or vegetables from decaying. Some persons maintain that a warm and dry basement or stove-room is the best of all places for squashes. A horticultural contributor to the Tribune holds that "a dry store-room, or furnace-heated apartment, that never gets cold enough to freeze, or a closet near a fire-place, are good places in which to keep squashes and pumpkins. They also keep well, if hung up in baskets or bags overhead in the kitchen, or on a hanging shelf."

In our own experience, such warm rooms, or closets where the temperature varies much, are poor places for the purpose. We succeed best with squashes kept in a cold, dry cellar, and not exposed to much light. Theoretically and practically, heat, moisture and light are found to promote rapid decomposition. The squashes should be placed on shelves separately, and with a few thicknesses of paper under each.

The Ampelopsis in England.

In the Autobiography of Leslie, the artist, lately published, we find the following passage:

"The country about Dawlish is all hill and valley, very luxuriant and beautifully diversified with gentlemen's seats and villages. The cottages and churches are of the most brilliant white, and a kind of vine which is generally seen spreading over the walls of the former, the leaves of which are at this season (November) a bright crimson, produces a beautiful effect." The painter doubtless alludes to the Ampelopsis, or American Ivy.

Most Important Corner of a Garden.

On page 344 one of our associates has said something to the children about *their* garden. We must add a word or two here specially addressed to all who have the care of children—their own or others'. Those who have chanced to visit our homestead the present year, were perhaps a little surprised on passing from the lawn to find at the very entrance to the beds of flowers and vegetables in the garden, a somewhat irregular plot containing a great variety of different kinds of plants growing in apparent confusion, but not entirely without system. Here were beets, carrots, onions, cabbages, sweet peas, strawberry plants, potatoes, dahlias, turnips, nasturtiums, morning glories, and perhaps thirty other things—some in pots, some in hills, some in rows, some in beds, some on mounds of earth, and so on. Boards laid on the edges and held up by stakes driven down, marked the boundary lines. All this was the work, and solely the work of three children, the oldest a girl not seven years of age, the others boys of nearly three and five years old. Their ground was planted with scattering seeds they had collected, or voluntarily asked for, and with refuse plants thrown into the walks by the gardener. Every thing of this kind was seized upon as a lawful prize and planted, watered, and watched with the greatest care and solicitude.

And what was the result? These three little ones spent many hours daily in out-door healthful exercise, and away from temptation. They asked questions innumerable, and studied the habits and wants of the plants with the earnestness of philosophers. They watched the gardener in all his operations, and practiced the lessons they thus learned. No one interfered with their operations on their own territory, or offered a word of unasked advice. They were led to think and observe for themselves, and this we believe to be the true education (drawing out thought). Without any attempt to teach them directly, the older of the three has learned to name and describe thirty to fifty flower plants in our own larger garden, and the second in age has learned the names of at least twenty.

And we too, have learned anew an old lesson, and feel more forcibly than we have ever tried to write hitherto, the value and importance of a children's garden. If we and our children live to another Spring, a larger garden for them, and more facilities for its culture will be the first thing provided. (They have already laid by dozens of little papers of seeds, and show that their experience has developed provident habits.)

Now what we intend for our own little ones we would earnestly bespeak for all the other children belonging to the great "Agriculturist Family." Parents, or guardians, a square rod or two of ground, or more, for your children, will not be missed from your broad acres, or your village plots. Let them have a garden of their own—entirely their own—not to be interfered with by any older person whatever. Let it be understood that they are permitted to cultivate it just as they choose, and when they choose, and to enjoy or dispose of the product at their own pleasure. Look in upon their operations not to criticize but to express pleasure by looks and words. Begin now to talk about their next Summer's garden, and suggest the saving or gathering of seeds. Do this, and from the nature of the case, as well as from what we have seen, we can confidently predict that after one year's trial you will need no second hint.

Green-Houses for the People... No. II.

(Continued from page 306.)

In addition to the simple arrangements for preserving plants, referred to in the previous article, our gardener, Franz M. Otto, who originally came from Hamburg, Germany, describes

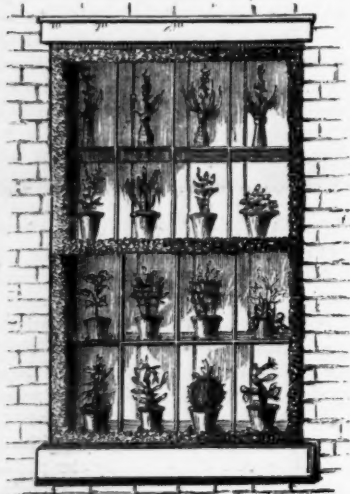


Fig. 4—DOUBLE WINDOW.

a pretty arrangement he has seen in Europe, though not very common there as yet. The bench or sill of a window is made wide, and double sashes are put up—one on the extreme outside of the wall, and the other on the inside. This leaves a space between the glass of 8 to 12 inches. Light cross shelves are inserted at different heights, and plants in pots, and bulbs in glasses, are arranged upon the shelves. These present a beautiful lively appearance in mid-winter, whether viewed from without or from within. Sometimes a light frame work, of the form and size of the window, is thrown around the outside casing of the window, with one or more light bars across the middle opposite the joining of the sashes; and upon this frame a wreath of green moss is fastened with thread. Fig. 4 presents an outside view of a window so fitted up. If the window be large, there may be additional perpendicular and horizontal bars covered with moss, giving the whole a still more lively look. A very little trouble, and the simple expense of an additional sash, which will increase the warmth of the house and save fuel at the same time, is all that is required to fit up a window in this manner. The inside sashes are movable of course, to allow for heat and ventilation, as described for bay windows, page 308.

A LEAN-TO GREEN-HOUSE.

Let us here recall the original proposition, viz.: that a green-house is essentially any structure so under control that there can be secured at all times, plenty of LIGHT, MOISTURE, and VENTILATION, and a TEMPERATURE that will always preclude frost. A green-house may be placed by itself, or it may adjoin a dwelling or other building. The simplest form is a lean-to, on any side of a building except the north. Fig. 5 gives an outline form. The general architecture and form should harmonize somewhat with the building against which it is placed. To economize heat and labor, it should stand nearly on the ground level, if a dry soil underneath can be secured. The foundation, carried say 20 inches above the ground, may be of stone or brick work; or strong posts of durable wood may be set in the ground and covered on outside and inside with boards,

filling between with any dry substance, such as coal dust, tan-bark, shavings, sand, or dry loam. In Europe a foundation is often cheaply made by using clay mortar in a mass, coating when dry with tar, or plastering with cement. The length of the structure may be any where from 15 to 50 or 500 feet. The highest part of the roof should be about 10 feet inside measure, above the ground floor; and the lower side $4\frac{1}{2}$ to 5 feet. If the foundation wall be 20 inches high, the sashes on this side will be $2\frac{1}{2}$ to 3 feet high, after allowing for sill and plate. Any unnecessary height only increases the space to be warmed.

The general construction may be the same as described for cold graperies, (Sept. No., page 272, which see,) with this difference, that a green-house needs more light and ventilation during Winter, to secure which, one side and the ends are covered with glass in sashes. The sashes on the lower side are hung by hinges at the top, with a flat iron bar attached to the lower side to push them outward. An iron pin on the sill fitting into holes or notches in the bar, enables one to fasten the sashes at any desired elevation. The end coverings may be simply sashes permanently fixed. If the closest economy be studied, the roof sashes may be just as described for cold graperies. It is more convenient for Winter use, to make these in two parts, one a short sash at the top sliding down over the longer one below, as shown in the first two sashes in fig. 5. The third sash shows the single sash arrangement. Weights and cords over pulleys for raising and lowering the sashes are easily and cheaply provided, and are very convenient, but the simple arrangement of hooks

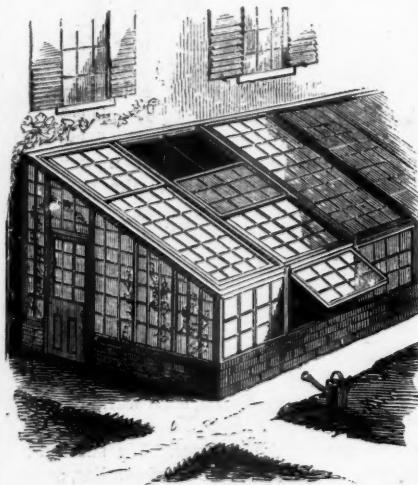


Fig. 5—LEAN-TO GREEN-HOUSE.

and staples described for cold graperies—may be made to answer.—So much for the general structure of one of the cheapest, simplest forms of green-houses. A multitude of other forms might be given, but our main purpose here is to suggest the cheapest methods, and to indicate at the same time the principles to be followed in all forms, however complex, artistic, or costly.

HEATING GREEN-HOUSES.

The cheapest plan for warming a lean-to green house, is to have it connected by a door directly with a living room of the dwelling which can be kept warmed by a stove during cold nights as well as in the day time. The air passing through the connecting door will generally be sufficient for a small green-house. In extreme cold weather, mats, blankets, or other covering on the outside of the glass may be useful to save fuel. The more hardy plants may be arranged

on the outside, furthest from the door. The objection to this mode of heating is, that unless the whole air of the dwelling room be kept unpleasantly moist, the air around the plants will be too dry, especially in very severe weather when much fire heat is required. But even this objection is not so great as to prevent any one from having a green-house by his dwelling.

A second, and still better mode of heating economically, may be adopted when the dwelling is warmed by a furnace. The hot-air pipe from the furnace should enter the green-house at the bottom, and if convenient, in the part most exposed to cold. A broad pan of water

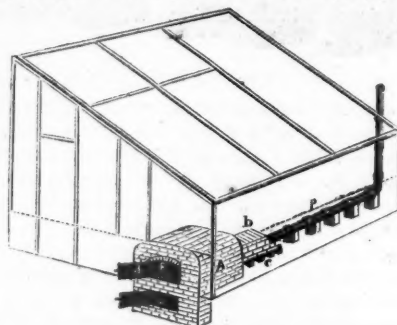


Fig. 6—HEATING FURNACE AND FLUE.

set just over the opening of the pipe will serve both to spread the rising warm air, and to supply moisture. Every hot air furnace should be provided with an apparatus near the fire for charging the heated air with moisture, whether it is to go into a dwelling room or into a green-house. (See on this subject, page 324, Nov., 1860.)

A third method of heating, and one still common in green-houses in this country, is to place a stove in one corner and conduct a pipe from one side downward and along near the bottom, and then out at the rear, running the pipe up far enough on the outside to secure a draft. The pipe needs to be of galvanized iron, or it will rust through in a season or two. The difficulty of maintaining a uniform, low heat in such a stove, is a serious objection, but we know of commercial green-houses so warmed.

The fourth and next cheapest mode of heating, and a better one than any of the preceding, is to construct a flue of brick work, with or without the addition of common earthen ware pipes, as shown in fig. 6. *F* is a furnace or fire place surrounded with brick work, arched above, with a grating of iron bars below. For a small green-house, the fire vault, if for coal, may be say $1\frac{1}{2}$ feet wide, $2\frac{1}{2}$ feet high at the center of the arch, and running back say 2 feet. If wood is to be used, it should be rather larger than this. An iron door *d*, shuts against an iron frame in front of the fire. The grating stands about on a level with the floor of the green-house. Below this, in the ground, is a vault for ashes, with a sheet iron door to regulate the draft and take out ashes. An excavation outside the green-house, bricked around, is required in front of the vault, *v*, to give access to it. The doors *E*, and *V*, are to be just outside of the green-house, so that ashes, dust and smoke, shall be kept entirely from the plants. The brick-work around the fire may be built similarly to a baker's oven. A brick flue should be continued back from the fire oven at least 4 feet, to absorb the strong heat nearest the fire. This brick flue may be continued entirely through the house into a chimney at the rear. A cheaper plan, however, is to make the continuation of common earthen ware pipes, 4 to 6 inches in diameter, and fitting into each

other, as shown in fig. 6. The flue, whether of brick or earthen ware, should start about on a level with the ground, and gradually rise half an inch or so in the foot, as it is continued through the room. As a foundation for the brick work behind the fire, boards may be used, or better, stones

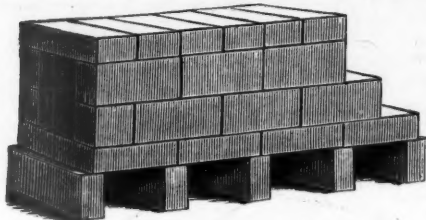


Fig. 7—MODE OF LAYING BRICKS.

laid in the ground up to the surface. Then set bricks on edge cross-wise, so far apart that flat bricks laid lengthwise will break joints upon them. For the sides of the flue, lay 2 bricks, one on the other edgewise, and cover with bricks laid flat across the top, as seen in fig. 7. If the bricks be 8 inches long, 4 inches wide, and 2 inches thick, this will leave a flue 4 inches wide and 8 inches high in the clear, with only a single thickness of brick on every side. The openings between the supporting bricks admit the free passage of air underneath, affording additional heating surface at the bottom. As lime mortar is liable to crack, it is better to lay the bricks in worked clay, or good clay loam mixed with a little lime, or with cow dung. After drying thoroughly, white-wash the whole; this will also stop cracks, and improve the looks.

Japan Lilies.

There are three leading varieties, named *Speciosum*, *Album*, and *Punctatum*. The first has a ground color of clear rose, shading to white, covered with numerous small projections of bright crimson. The *Album* is pure, virgin white, with the same projections as the former, but without color, and compared by some one to "frost work and snowy stalactites." The *Punctatum* has a white ground color, the petals studded with rose-colored projections, and spotted with the same tints. All of them are remarkably fragrant; the perfume is most delicate and refined, making them very desirable.

It is supposed by many that these plants are not hardy; but all the protection they need in Winter is six or eight inches of leaves fastened down by a stone, or a grass-sod. A little experience shows that they thrive best if transplanted every three or four years, into new earth. While they succeed well in any good garden soil, they do better in a border prepared as follows: "Two parts from an old hot-bed, composed of leaves and horse manure, at least two years old; one part sandy peat." No garden can be complete without these superb Lilies.

For the American Agriculturist.

Hyacinths in Glasses—An Improvement.

Hyacinths look much prettier in glasses than in flower pots, but they do not thrive near so well in water as in good soil. We may secure strong, healthy plants with fine large flowers in glasses, as follows: First secure good sound bulbs as early as possible; those that have not commenced to grow are preferable. Put them into pots about 8 inches across, in a composition of two parts good loam, one part well decomposed manure, and one part sand, well

mixed together. When potting, leave the tip of the bulbs just above the soil, putting only one in a pot. When this is done, carry them into a cellar, and place them into one corner out of the way, where they will not freeze; then cover them about four inches deep with sand, or any kind of soil, to prevent the roots from pushing the bulbs up. Keep them there till they grow about two inches, then bring them gradually to the light, letting them remain in the pots until they have grown about five inches high. Then turn them carefully out of the pot, and dip them gently up and down in a pail of water until every particle of soil is washed from the roots. When this is done, insert the roots with great care into hyacinth glasses, and fill up with soft water. The water must be changed once a week; let it stand in the room 24 hours before pouring into the glasses, so as to be as near the same temperature as possible. By following this, you will easily have strong healthy plants that will bloom beautifully. GAINESBOROUGH, Cold Spring, N. Y.

A Safe for Umbrellas.

Custom is the only foundation for some laws, but we have never yet seen a legal decision settling the mooted question whether, by a law of custom, a man acquires an absolute right to an umbrella by the simple fact that he has "taken it" where he happened to find it. However this may be, an ingenious Yankee, Foote by name, has settled the question that a man can not always "take" the umbrella. The annexed engraving, (fig. 1,) illustrates how he is "estopped." C is the pan for catching the drip; B, the rings for receiving and holding umbrellas; while A is a lock which holds the handle so firmly that no one can remove it except the holder of the key. One of the locks is shown in fig. 2. It has two circular plates with corres-



Fig. 1.



Fig. 2.

ponding slots in each, large enough to hold the handle. On turning the top piece one quarter round, an inside lock closes, and the handle is held fast. It is impossible to turn the plate back without using the key, (B,) which is a small bit of metal to be carried in the pocket. In fig. 1 there are six locks. Some stands are made

with only one, and from this size they run up to 28 or more locks. Such large stands are well adapted to hotels and public halls. No two keys or locks are made alike, so that any man can lock up his own umbrella, and leave it safe. The stands are made of iron, in good style, and are ornamental as well as useful. The cost is about \$1 for each lock, which is not much higher than a common stand of the same quality.

THE HOUSEHOLD.

Cheap Food for the War Times—Important for Every Housekeeper, and for her "Quarter-Master"—Making \$40 go as far as \$100—Thirty Three Methods of Cooking Indian Corn.

Economy is the word now, or should be, in every family. Some are compelled to economize; others do so from motives of benevolence, that they may be better able to assist their less fortunate friends and neighbors; while others will practice economy from patriotic motives. There are over twenty million inhabitants in the Northern and Middle States. If by economy in food, clothing, luxuries, furniture, carriages, and in sundry other items, the average reduction of current expenses for one year be only 7 cents a day each, the savings will amount to over five hundred million dollars (\$500,000,000!) This would balance the four hundred millions expended by the government, and leave one hundred millions as an offset to the extra expenses and contributions of those not connected with or employed by government, so that the nation would have quite as much wealth after a year's war, as if peace had prevailed and the people had gone on in their previous modes of living. The half million soldiers will of course save money during the year, for even the humblest private gets all his food, clothing, and traveling expenses, besides \$156 in money, which all come out of the four hundred million dollars expended by the government, while the balance is nearly all paid to manufacturers, laborers, cultivators, etc., here at home.

We believe the people can and will reduce their expenses 7 cents a day each, on the average. With some the saving will amount to but one or two cents daily, while others will far exceed the 7 cents. There are many ways in which people can expend less than they would have done under other circumstances. In the single item of clothing much will be saved. Some will buy one coat or one dress less. Some will wear a \$4 or \$5 bonnet instead of a \$7 or \$8 one. Some will wear a good substantial pair of boots or shoes instead of a fancy pair that would cost more and give out sooner—and this will be a manifest saving of health and comfort. The old harness will do to drive to church or to town for another year. But we can not particularize further. One of the few good effects of this war will be to bring us back to more economical habits which will cling to us afterward.

The main object of the present chapter is to assist, if we can, in economy in food. Did it ever occur to the reader how little, comparatively, we, as a people, use Indian corn? This crop is grown more generally, and with more certainty than any other, and its actual production far exceeds that of all other grains taken together. And yet a few pounds of meal per month, for dessert puddings, and occasional

other dishes, is about the extent of the consumption of corn in the great majority of the families in the Northern States. Some families use much more, but these are exceptions to the general rule. And yet, a bushel of ground corn affords quite as much healthful nourishment, as a bushel of wheat. A bushel of corn weighs 56 lbs., and a bushel of wheat 60 lbs.; but there is more waste in grinding the wheat, in the form of bran and ship stuff. Corn differs from wheat mainly, in having a little less gluten, and rather more oil and starch. For the colder half of the year the oil and starch of the corn are better adapted to the wants of the body, than the large amount of gluten in wheat. Corn contains all the elements needed in the body, and in just about the proportion they are required in Winter, while they are nearly suited for food in warm weather. A bushel of corn contains four times as much nutriment as a bushel of potatoes.

We have just examined the market prices of Wheat, Corn, and Potatoes, in different parts of the country. The examination shows, first, that taking the country together, the price of a bushel of corn and a bushel of potatoes is about the same, (they vary considerably in some localities, but not generally); and second, that a bushel of wheat sells for $2\frac{1}{2}$ times as much as bushel of corn. We therefore find that, on the average, an amount of nourishment costing \$1 in the form of corn, costs $\$2\frac{1}{2}$ in the form of wheat, and \$4 in the form of potatoes. (Four-fifths of the weight of potatoes are water.) So, then, of three families requiring the same amount of nourishing food, what would cost one \$40 a year in the form of corn, would cost the second \$100 in the form of wheat, and the third \$160 in the form of potatoes.

Why, then, do not people consume more corn? Answer.—Fashion or custom has much influence, and ignorance of the value of corn, or of good modes of cooking it, does the rest. To do away with the last named difficulty, we propose to give here a considerable variety of methods for preparing corn, and corn meal, so as to make them palatable. Of the healthfulness there is no doubt, and from the methods given below, every housewife can find one or more that will suit the wants and taste of those for whom she provides.

The following directions have all been furnished expressly for this number of the *American Agriculturist*. Each of the several editors' families have been called upon for contributions, and we have each asked our friends for their best recipes. Wife's written cook book has been ransacked, and we have consulted the mothers and aunts of the neighborhood, noted for their good cooking. Here is the result. (Their derivation from so many sources, accounts for several having the same heading.)

1. Hasty Pudding, or "Mush."—We place this first as the most common and most easily made. No one ever "took sick" from eating mush and milk, or fried mush in any suitable quantity. (We knew a student well, who left the active labors of the farm to pursue his studies in an Academy. The first term he used a variety of food, and was in poor health. The next term of 11 weeks he ate only mush and milk, for breakfast, dinner, and supper, and actually grew fat on it, while he lost all headache, and though pursuing five heavy studies, he was first in his class, and went through the term strong and vigorous, without an hour of lost time, though he worked enough in the field and garden, at 8 cents an hour, to pay all his expenses). "Mush and milk" is seldom relished, because few people know how to make the mush. The whole secret is in cooking it thoroughly. Rightly made it is not "hasty pudding." A well made "mush" is one that has boiled not less than a full hour. Two hours are better.

The meal needs to be cooked; then it is both good and palatable. The rule is: Mix it very thin and boil it down, avoiding any burning or scorching, and salt it just right to suit the general taste. Prepare a good kettle full for supper, to be eaten with milk, sugar, molasses, syrup, or sweetened cream, or sweetened milk. If a good supply be left to cool, and be cut in slices and fried well in the morning, the plate of wheaten bread will be in little demand. It must be fried well, not crisped, or burned, or soaked in fat. If thoroughly cooked in the kettle, it will only need to be heated through on the griddle. If not cooked well in the kettle, longer frying will be necessary.

2. Dry Mush and Milk.—Parch corn quite brown, grind it in a clean coffee mill or pound it in a mortar, and let it soak in warm milk until softened; then if too thick, add more milk and eat when cold. Or meal may be browned and eaten in the same manner.

3. Samp.—This is a good method of using corn, and a popular one when well tried—made not of the white hominy of various grades of coarseness and sold in small bags in various stages of freshness; but yellow corn fresh plucked from the fields, or well preserved, and but recently crushed (not ground) at the village mill. Boiled well, as directed above for pudding, no dish is more popular than this with children, and many grown people, particularly in Autumn and Winter. It can be used with syrup, or good milk, or sugar, or both. Like hasty pudding it is good for the second day. The various grades of "hominy" are very good articles of food but not so cheap nor always so good as samp.

4. Boiled Indian Corn (ripe).—Take common yellow corn, and boil it in a weak lye, until the hulls are broken and easily slip off. Then pour off the lye and rinse the corn thoroughly. Boil it until soft, in clear water, adding a little salt. Eat with cream and sugar, or butter and syrup, or simply with butter as a vegetable.

5. An Excellent Corn Cake.—Take 1 pint of corn meal, one quart of sour milk, 4 eggs well beaten, 2 tablespoonfuls of sugar, and soda enough to sweeten the milk. Mix all well together, and bake in pans. To have any corn cake with eggs light, the eggs must be well beaten. [For this recipe the sum of \$3 was originally paid—to a baker we suppose.]

6. Corn Bread (a).—Take 1 quart of sour milk, 1 tablespoonful of saleratus, 1 teaspoonful of salt, $1\frac{1}{2}$ cups of molasses, 3 cups of Indian meal, and 8 cups of flour. Mix well, and bake three hours in a slow oven; or, as some prefer, steam it three hours and then bake it $\frac{3}{4}$ of an hour.

7. Johnny Cake, or Corn Bread.—The following (not before published,) we formerly copied from the MS. of a good housewife in Georgia: Beat two eggs very light, mix with them, alternately, one pint of sour milk or buttermilk, and one pint of meal. Add one tablespoonful of melted butter. Dissolve one tablespoonful of soda in a little of the milk and add to the mixture. Last but not least, beat hard together and bake quick.

8. Plain Johnny Cake.—Take 1 quart Indian meal, 1 quart buttermilk, 1 teaspoonful salt, 1 teaspoonful of saleratus, 2 tablespoonfuls of butter or other shortening, 1 tablespoonful sugar, 1 or 2 beaten eggs if you have them. Mix and bake in shallow tin pans $\frac{1}{2}$ hour.

9. Florida Johnny Cake.—The following simpler recipe we picked up in Florida, and know by experience that it makes good bread: Take one tumbler of milk, one of Indian meal; beat up one egg; mix the whole together and bake well.

10. Sour Milk Corn Cake (a).—Take one quart of sour milk or buttermilk, a large teaspoonful of pearl ash, a teaspoonful of salt. Stir the milk and meal together to make a stiff batter, over night. In the morning, dissolve the pearl ash in warm water. Stir up quickly; bake in shallow pans.

11. Sour Milk Corn Cake (b).—Take

one pint of sour milk, and one of cream, two eggs, a teaspoonful of salt, a teaspoonful of saleratus, and Indian meal enough to make a thin batter. Bake one hour in shallow pans, well buttered.

12. Virginia Corn Dodgers.—Take three pints of unsifted yellow corn meal, one tablespoonful of lard; and one pint of milk. Work all well together, and bake in cakes the size of the hand, and an inch thick. We have eaten this in Dixie's land, and know it to be palatable—to a hungry man highly so.

13. Corn Bread (c).—3 pints of meal, and 1 of rye or Graham flour, 2 tablespoonfuls of sugar, and 1 teaspoonful of salt. One yeast cake softened in warm water. This should be mixed with warm water to a dough just compact enough not to run, and then be put in a deep pan, and left by the fire until it rises about one fourth higher than when mixed. Bake in a moderate oven five hours. This makes a thick crust upon the top which is to be lifted off, and the remainder eaten warm. Slice and heat in a steamer for breakfast. The crusts are to be softened in warm water, and crumbled fine for the wetting of the next loaf, and the cook will be surprised to find the second experiment far superior to the first.

14. Rye and Indian Loaves.—(First-rate—the real Yankee loaf.) Scald 2 quarts Indian meal, and when cold add 1 quart unbolted rye flour, $\frac{3}{4}$ pint molasses, 1 tablespoonful salt, and water enough to make a stiff sponge or batter. Pour into deep iron pots or kettles, and bake in a slow oven for 3 or 4 hours. If in a brick oven, leave it over night. A standard bread in New-England, eaten both hot and cold.

15. Apple Corn Bread.—Mix 1 pint of Indian meal with 1 pint of sweet milk, and add 1 quart of chopped sweet apples, and a small teaspoonful of salt. Bake in shallow pans in a quick oven. To be eaten hot.

16. Pumpkin Indian Loaf (b).—Scald 1 quart of Indian meal, and stir in 1 pint stewed pumpkin, mashed fine, or sifted; add 1 teaspoonful salt, $\frac{1}{4}$ pint molasses, mixing to a stiff batter. Bake in deep iron dishes as 14.

17. "Whitpot" (Indian).—Take 1 quart sweet milk, $\frac{1}{2}$ pint Indian meal, 2 or 3 eggs, $\frac{1}{4}$ teaspoonful salt, and 4 tablespoonfuls sugar. Boil 1 pint of the milk, stir in the meal while boiling, cook 5 minutes, and add the remainder of the milk. Beat the sugar and eggs together, and when cold, stir the whole thoroughly, and bake 1 hour in a deep dish. To be eaten either hot or cold.

18. Molasses or Mock Whitpot.—Indian meal and milk same as above, adding $\frac{1}{4}$ pint of molasses, and cooking in same manner. A very cheap and good pudding, easily made.

19. Indian Dumpling.—Scald 1 pint Indian meal, 1 small tablespoonful shortening, $\frac{1}{4}$ teaspoonful salt, $\frac{1}{4}$ teaspoonful soda or saleratus. Boil 1 hour in a bag. Serve hot, with gravy and meats.

20. Corn Muffins (a).—Take one pint of sifted meal, half a teaspoonful of salt, two tablespoonfuls of melted lard, a teaspoonful of saleratus (dissolved in two large spoonfuls of hot water). Wet the above with sour milk, as thick as for mush or hasty pudding, and bake in buttered rings on a buttered tin.

21. Corn Muffins (b).—One quart of Indian meal, a heaping spoonful of butter, one quart of milk, a salt spoon of salt, two tablespoonfuls of yeast, and one of molasses. Let it rise four or five hours. Bake in rings. It may also be baked in shallow pans. Bake for one hour.

22. Corn Griddle Cake.—Take one quart of sour milk, 3 eggs, 1 large teaspoonful of saleratus, 1 small teaspoonful of salt, and add sufficient meal, and flour to cause the cakes to turn easily on the griddle. Use a third as much flour as meal.

23. Corn Griddle Cakes with Yeast. Take three cups of Indian meal, sifted, one cup of Graham flour, two tablespoonfuls of yeast, and a

salt spoonful of salt. Wet at night with sour milk or water, as thick as pancakes, and in the morning add one teaspoonful of cooking soda or saleratus. Bake on a griddle.

24. Indian Griddle Cakes.—Take 1 pint of Indian meal, 1 cup of flour, 1 table spoonful of saleratus; 1 teaspoonful of ginger, and sour milk enough to make a stiff batter. Bake on a griddle as buckwheat cakes.

25. Corn Griddle Cakes, with Eggs.—One quart of boiling milk or water, mixed with a pint of meal. When lukewarm, add three table spoonfuls of flour, three eggs well beaten, and a teaspoonful of salt. Bake on a griddle.

26. Baked Indian Pudding (A).—Scald a quart of milk, and stir in seven table spoonfuls of sifted Indian meal, a teacupful of molasses or coarse moist sugar, a table spoonful of powdered ginger or cinnamon, and a teaspoonful of salt. Bake three or four hours. If whey is present in the pudding, pour in a little cold milk after all is mixed.

27. Baked Indian Pudding (B).—Three pints of milk, ten heaping table spoonfuls of meal, three gills of molasses, and a piece of butter as large as a hen's egg. Scald the meal with the milk, and stir in the butter and molasses. Bake four or five hours. Some add a little chopped suet in place of the butter.

28. Baked Indian Pudding (C).—Boil 1 pint of sweet milk; stir in 1 cup of meal while boiling; pour it into a baking dish and add $\frac{1}{2}$ cup of molasses, 2 table spoonfuls of sugar, 1 teaspoonful of ginger, $\frac{1}{2}$ teaspoonful of salt, and a little nutmeg. Then add 1 pint of sweet milk with one egg well beaten. Put into the oven while warm and bake one hour.

29. Indian Pudding (d).—Wet 3 table spoonfuls of meal with cold water. Add 2 eggs well beaten, 3 table spoonfuls of sugar, and a pinch of salt. Beat all well together. Add 1 quart of scalded sweet milk. Bake $\frac{1}{2}$ of an hour.

30. Boiled Indian Pudding (a).—Three pints of milk; ten table spoonfuls of sifted Indian meal, half a pint of molasses, and two eggs. Scald the meal with the milk, add the molasses, and a teaspoonful of salt. Put in the eggs when it is cool enough not to scald them. Stir in a table spoonful of ginger. Put into a bag and tie so that it will be about two thirds full of the pudding, in order to give room to swell. The longer it is boiled, the better. Some like a little chopped suet added.

31. Boiled Indian Pudding (b).—Stir Indian meal and warm milk together, making the mixture pretty stiff; add while stirring two or three table spoonfuls of molasses, a teaspoonful of ginger or other spice, and a little salt. Boil it in a tight covered pan. A tin dish made for the purpose is very convenient. A very thick cloth will answer. Leave plenty of room for the meal to swell. Thin slices of apple stirred into the mixture before baking are much relished by some.

32. Boiled Indian Pudding (c).—Take 1 quart of sour milk, 1 large table spoonful of saleratus, $\frac{1}{2}$ teacupful of molasses, 1 cup of chopped suet, and meal enough to make it stiff. Tie in a cloth and boil two hours. The best sauce for this is sour cream sweetened with good molasses.

33. Maize Gruel for Invalids.—Stir a large table spoonful of Indian meal into a teacupful of cold water, and salt. Have ready a quart of cold water in a spider, pour in the mixture, and boil it gently twenty minutes, stirring it constantly the last five. To make it richer boil raisins in the gruel, add sugar, nutmeg, and a little butter.

Wanted!

A recipe for making a first-rate corn bread to be eaten cold, when from one to four days old.—Also: Any number of hints for getting up good, cheap articles of food of various kinds.

To CURE DYSPESIA: Take a new axe, put a white hickory handle in it, bore a hole in the top

of the handle, fill the hole with gum camphor, and seal it up. Then take the axe and cut cord wood, at fifty cents a cord, until the heat of the handle dissolves the camphor. [Dose to be taken daily.]

Ironing a Tidy—Valuable Hint.

"Tidies," or the various articles for covering sofas, chairs, tables, dishes, etc., knit in open work (crocheted) with coarse cotton thread or cord, are becoming very common, and most ladies know by experience the trouble of ironing them smoothly. The iron catches in the threads, and it is difficult to leave the meshes all in regular order. We are indebted to Mrs. Jno. E. Keeler, of Queens Co., for a capital hint on this subject, which, having been put in practice at home, is highly approved. Instead of ironing the tidy, a broad board is provided, and covered over with common bleached muslin. The washed tidy, after starching, is spread out smoothly and regularly upon this, and the edges are fastened all around with pins stuck into the board. On drying it shrinks smooth, and appears far better than when ironed. A lady, to whom we showed the above, tried it, and reports that this single item is worth to her more than a year's cost of the *American Agriculturist*.

Okra or Gumbo Soup.

It is now almost too late for this, the present season, but in answer to several inquiries from new subscribers, we repeat former directions. The pods are gathered while green, sliced, and then boiled in any meat broth for two hours, or so. The okra gives a jelly-like consistency to the broth or soup, and the flavor is very agreeable to most persons. This is the noted "gumbo soup" of the Southern States. The books say the okra pods are not good when over 1 $\frac{1}{2}$ to 2 inches in length. We use them at any time before the seeds become dark colored, though when they are too hard to boil to pieces, the sliced pods are removed from the soup before bringing it to the table. One of our readers at Troy, N. Y., Mrs. Mallory, is experimenting in drying the green pods, cut across into thin sections. We shall be glad to hear of the result.

For the *American Agriculturist*.

To Pack Beef and Pork.

Select for salting that part of the carcass that has the fewest large blood vessels, and not attempt to pack it until entirely free from animal heat. Removing as much of the bone as possible, pack the pieces close in the beef barrel, and place on them a weight sufficient to sink them. For one hundred pounds of beef, dissolve five quarts good coarse salt, and five ounces pure saltpetre, in two pails of soft water; boil, and skim well, and while boiling, pour it over the beef, covering it closely. If the meat is not entirely covered, make more brine as soon as possible, and pour it on hot, as at first. This is my Winter mode. The meat will be fit to boil in twenty four hours, but will not keep sweet longer than the first of April. In the Summer I often corn a little, say twenty pounds, for immediate use. I prepare dried beef in the same manner, using for this purpose the hams, and in that intended for Summer use, allow ten quarts of salt to 100 pounds. It is of no use to add salt, after the first corning. I once lost a half barrel in that way; the full quantity of salt must be put on at the same time.

In packing pork, remove the lean meat to be used for sausages; it is hard and almost worth-

less when salted. Take out the bone, leaving only the clear side pork. Cut this in strips about six inches wide. Cover the bottom of the barrel with a layer of good salt one and a half inches thick, lay in the pork edgewise, crowding it as compactly as possible, and cover with a layer of salt like the first, and so on until the whole is packed. Enough space should be left at the top of the barrel to allow four to six inches of brine above the meat. When all is packed, lay a heavy weight upon it, and pour over it a brine made of soft water and salt, as strong as possible, that is, giving all the salt the water will dissolve. The brine should always cover the pork at least four inches deep.

E. F. HASKELL.

Wringing Machines—A Confession and a Caution.

We have strongly recommended these new implements, not only as labor-saving, but as clothes-saving also. We are sure that a good wringer will more than pay for itself every year in the saving of garments, even in the smallest family. But this is not the case with many of the wringers that are now being got up and sold so abundantly through the country. And to correct our own error first, we heret say that among those we consider faulty is the No. 3, (or \$5 size,) offered in our own premium list.* We consider it essential to a good wringer that there should be gearing or cog-wheels to connect the two india-rubber rollers, so that they shall both turn together. If this be not provided, there is danger that when large garments are run through, or a small garment goes through in a mass, one of the rollers may slip, and stretch, or even tear the fibers as badly as the twisting by hand wringing. Nos. 1 and 2 of the kind we offer as premiums, have the gearing, and are perfectly safe. We find on examination that the No. 3 (small size) has not the gearing or cogs, and therefore, while like all others similarly made, it may answer as a labor saver, it is not to be specially commended as a garment saver. We deem it necessary to caution our readers against buying any wringer, no matter how cheap, or how highly recommended, if it has not the cog arrangement, to make both rollers turn together, and to prevent the possibility of one of them slipping upon the cloth. While we admit that one of these defective wringers is better than none, the geared ones are far preferable, even if they cost three times as much.—One thing more. The good quality of a wringer depends much upon the thickness of the India rubber upon the rollers, and this should be looked to in buying. In the competition to get up the cheapest machine, some are made and sold with but a thin film or sheet of rubber, and their quality is correspondingly reduced. As the rubber is costly, a good wringing machine at a very low price, is out of the question. Any one can judge by examination, whether the rubber is half an inch thick, or more, so as to present a yielding, elastic surface against articles passing between the rollers. During the last month we had some sharp discussions with sundry manufacturers at the fairs and elsewhere, on the above points, and if bluffing and positive assertions were arguments, we should keep silent here; but believing the above cautions, especially the first one, are necessary, we place them before our readers.

* By an error, the larger "Hotel Wringer," or \$10 size, was called No. 3. It should be No. 1.—The No. 3, or \$5 size, is the smallest. The correction is made in the premium list in this paper, which see.



THE NEW FLAGEOLET.
(Engraved for the American Agriculturist.)

The Editor with his Young Readers.

The Young Musician.

The efforts of the young musician in the picture are amusing, but with him it is no laughing matter. His little flageolet is a greater treasure to him than the most costly piano would be in a rich man's dwelling, for possessions are, or should be prized according to the enjoyment they yield. You can see by the coarse clothing of these children and the rude furniture of the room, that they are poor. But what of that? Have they not a flageolet, with which to make real music, at least to their ears. How intently the brother of the player watches the wonderful instrument. He evidently thinks his brother a masterly performer. The whole is so natural, we love to look upon it. A friend while examining the picture said it carried him back to the days when he was first master of a flute, the gift of a relative; and he bears testimony that no single article ever gave him more pleasure. We know of no amusement more pleasing or innocent for both young and old, than the practice of music. In order to become proficient, it is necessary to commence learning young. The notes of music are not more difficult to learn than the letters of the alphabet, and when once learned, they will open the way to an unfailing source of pleasure. If you are so fortunate as to become possessor of an instru-

ment, imitate the example of the boy in the picture, while learning to use it. Give your whole attention to it for the time, but of course, not too long at a time. There are more important matters than music to be learned in youth, but practice the principle of doing whatever you may engage in, with your whole soul, and you may be sure of success.

A Mistake.

A station-master at one of the principal depots of the Great Western Railway in England, was noted for his self importance, and also for his cringing obsequiousness to persons of rank. One day he observed a gentleman walking up and down the platform with a cigar in his mouth. This was against the rules, and the station master requested him to stop smoking. The gentleman took no notice of it, and continued puffing. This irritated the station master, and in a most peremptory tone he ordered the cigar to be thrown away. Still no notice was taken. A third time he gave the order, still more angrily, and then, not being obeyed, he stepped up to the offender, and snatching the cigar from his mouth threw it away. The gentleman coolly continued his walk without speaking or noticing the angry man. Presently, a coach and four belonging to a neighboring nobleman drove up, and the smoker entering the carriage, rode away. The station master in great trepidation inquired his name,

and was in the utmost consternation when told it was Viscount Palmerston, Premier (First Lord of the Treasury) of England. He immediately called a carriage, and drove off post haste to the house where the Premier was stopping, and earnestly requested to see his Lordship. The Premier soon appeared, and the station master commenced a most abject apology for having "so grossly insulted his Lordship. Had he known who his Lordship was, he would not have treated his Lordship so for the world." The Premier heard him in silence, then looking upon him sternly said: "Sir, I did respect you because I thought you were doing your duty like a Briton; but now I see you are nothing but an unmitigated snob." It was a well merited rebuke, not easily forgotten. Remember boys and girls that he who does his duty, however unpleasant it may be, will always be respected.

Children's Flower Gardens.

It is too late, now, to sow flower seeds for this year's enjoyment. But it is a suitable time to prepare the ground for next year's use. And indeed it is a good time, now, to set out many hardy herbaceous plants and shrubs which will survive the Winter, and shoot up next Spring when the snow is off.

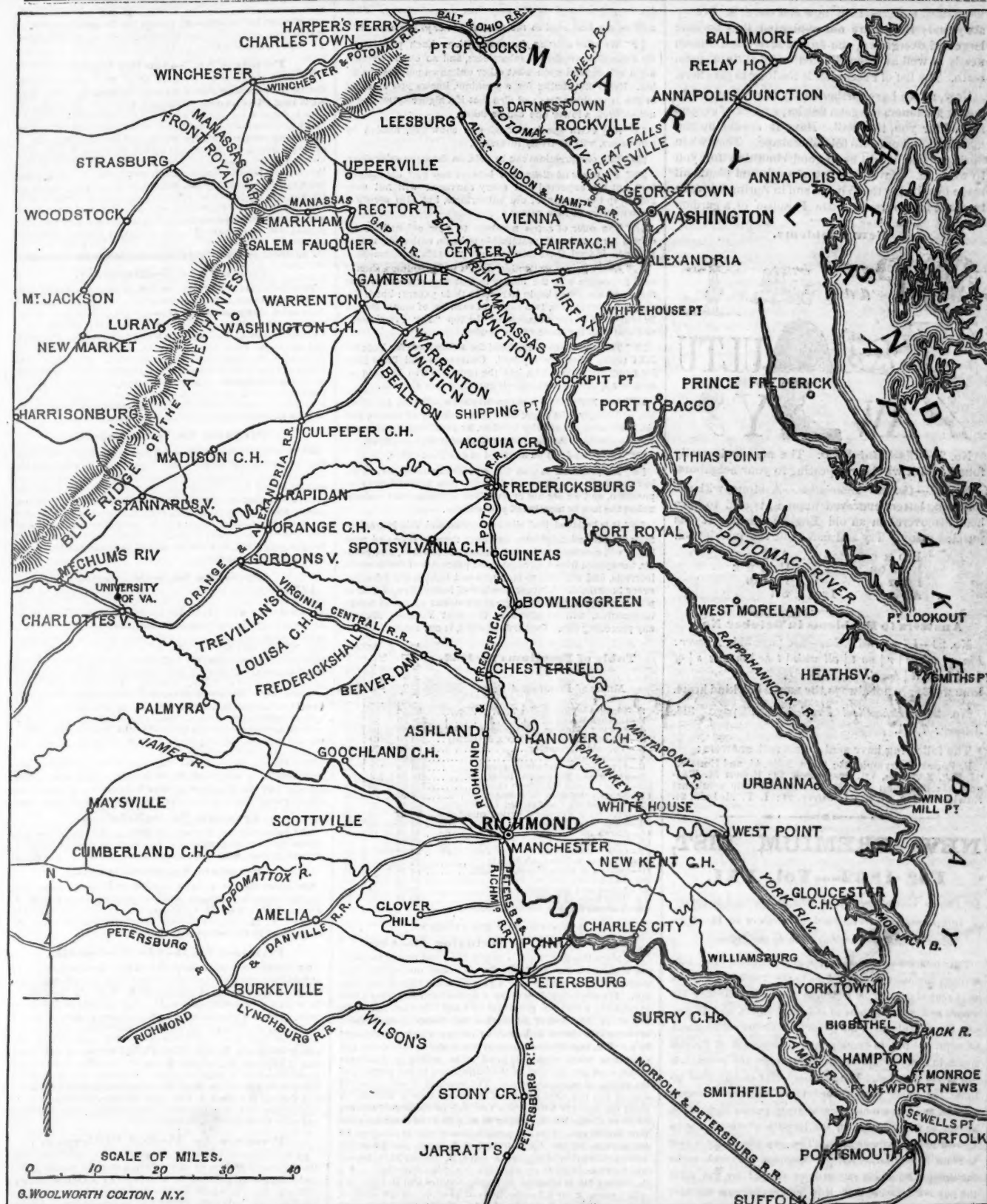
In the towns and villages which we visited the past Summer, we noticed only a few children's gardens. Here and there was a bed in father's garden, set off for the children, and it always delighted us to look at them. Some were surrounded with clean clam-shells for a border, others with broken china, or with father's surplus geological specimens. Violets, poppies, pinks, and morning-glories were favorite flowers. In one, we noticed a "Sensitive Plant," which, the family told us, every visitor was taken to admire; it was such a curious thing to see the leaves of a plant close up and fall at the touch of a human hand! In the center of one bed, a broken mantel-ornament was set up for a classic vase or fountain; at one side of the parterre, a china doll was fastened on a square block, for a statue of Venus, and on the other, a Sambo doll was enthroned as a bronze figure of Agricola!

In a neighbor's garden we found in the children's quarter, a well of water in full blast. It was dug twelve inches deep toward the center of the earth. An oyster keg was put down to strengthen the sides against caving in, and to hold the water. The well-sweep was a willow rod, supported on a crocheted bow of apple-tree wood. The bucket was a wooden tea-cup, of miniature pattern, and hung by a cotton string. A living fountain kept the well supplied with cool, fresh water, just as long as one of the children brought it from papa's pump. The plants in this garden were thoroughly irrigated, every time the children had a play-spell thereabouts. The plants were not of a kind to endure indiscriminate watering, and probably they died aquatics!

But such were not the only kinds of gardens we saw. Now and then, we met with a few in which there was an attempt at more order. And we thought a word or two of counsel from us to such young horticulturists might not come amiss. Here, then, follow a few hints:

Flowering plants may be classified as annuals, biennials and perennials. *Annuals* grow from seed to their full perfection in a single year: they blossom and form seeds and die, the same season. Among these, we have the poppy, sweet-pea, marigold, etc. *Annuals* are very desirable in a garden. They furnish plants of every variety of color and size, some blooming early and others late. Most of them are of very easy culture, such as any child can manage. Wait in Spring until the ground is dry and warm; then sow the seeds in finely pulverized soil, and cover very lightly. In a week or too they will be up. After this, the only care needed is to thin out the plants and keep down all weeds. Here are the names of half a dozen of the best annuals: Phlox Drummondii, Asters, Balsams, Portulacca, German Stocks, Marigolds. There are dozens more, nearly as good. (You will see many in our future Seed List for next Winter's distribution.)

Biennials are those which require two years to



MAP OF EASTERN VIRGINIA.

In response to frequent requests from our country readers, we present the above map, and also two others on pages 343 and 349. These maps are valuable now, as they embrace the main points of interest in the present war. The above map of Virginia was originally prepared for the N. Y. Tribune. We have inserted some new localities, made famous by recent events. The other two large maps have been engraved expressly for the *American Agriculturist*.

perfect themselves. They come up the first year from seed, and make a considerable growth, and then rest, without flowering. The second year, they start again into growth, produce blossoms and

seeds, and then decay. There are many good flowers in this class, such as Canterbury Bell, blue and white, Evening Primrose, Foxglove, Fumitory, Honesty, etc. These require no more care than annuals.

Perennials are such as live and bloom from year to year, and die only from old age, or exhaustion of the soil. Among these, we have the Phloxes, Spireas, Pinks, Lilies, Roses, etc. These require to

be divided and reset in new soil once in five or six years. If they are not re-planted, they become large and overgrown, and do not thrive and bloom nearly as well as when divided and put into fresh earth. The list of Perennials is too long to give here.

Now, all we have further to say at present to our young gardeners is—get a fine large piece of ground laid off for you, this Fall. Have it spaded up and manured, and put into tolerable shape. Then when Spring opens, it will be in good condition for you to work in. Have your list of seeds and plants all made out during the Winter, and in Spring be ready to make for yourself a little Paradise of a garden.

New Problems.



No. 25.—*Illustrated Rebus.* The answer is easily found, and it will bear repeating to your neighbors.

No. 26.—*Curious Inscription.*—A stone, with the following letters engraved upon it, is said to have been discovered in an old English village. It has puzzled many. Try and make out the inscription.

FORC ATT
L ET OR U bt H E
I R T A I l S AG
A In S t

Answers to Problems in October No.

No. 23.—*Illustrated Rebus.*—See page 314. Answer: *Fin e | words | r | no t | all | wais | t | he | m | ark s | of | a | k | in d | heart.*

Fine words are not always the marks of a kind heart.

No. 24.—*Arithmetical Problem.*—See page 314. Answer: 7,691.

The following have sent in correct answers:

F. Porter Dalrymple, 23; "Jim, Ellie, Al, and Emmie," "J. M.", Swanton, Vt., Jessie Bell, 22; Robert M. Taggart, 23; Benjamin Doe, 24, (A fine algebraic solution); Edwin Berrian, 21, 22; I. Oliver, 24; I. T. McLain, 24.

NEW PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the *Agriculturist*, and forwarding them to the Office.

Experience has proved that it is a benefit to the subscribers themselves, as well as to the Publisher, to have an Agent at every Post Office, to attend to collecting the names and subscriptions of old subscribers, and to present the advantages of the paper to those not yet acquainted with it. But to employ and commission a Special Agent in every neighborhood throughout the country, is out of the question. We therefore offer certain good articles, the value proportioned to the number of names sent in, and leave them open to every person disposed to attend to the business, in the locality where he may be known to be a reliable man. The pay offered for a year to come is very large, but perhaps none too much so for the times. By giving the articles offered we can make the pay much larger than if in money, because we have facilities for getting these articles at a low rate. Besides, the advertising thus given to the manufacturers, induces them to bear a considerable portion of the expense on the articles we need for premiums.

In selecting articles for premiums, we have aimed to get such as are useful, and as have been most frequently called for by our readers. We wish it distinctly understood that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand things, will be sent out, but each article offered, is the best of its kind, and every one will be selected

by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.

We offer nothing for competition. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she is working for; and also that if a higher premium is not secured, a lower one can be taken.

Any extra specimen copies, or show bill, needed by canvassers, will be freely furnished.

Only one premium can be paid on the same subscriber.

We make no distinction between new and old subscribers, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

The offer of extra numbers to new subscribers received now, makes it practicable to begin collecting names at once. Indeed, these numbers are an extra inducement.

Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

The premiums are offered for subscribers for Volume XXI (1862), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

Any person who has commenced sending in names at 80c, and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

Clubs need not be confined to one Post Office.

No premium is sent till specifically asked for, as we have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be independent, out-spoken, and reliable, the special friend, advocate, and promoter of the farmer's interests, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next Volume, than in any preceding one. Onward, upward, is our motto.

Table of Premiums for 1862.

Names of Premium Articles.

Names of Premium Articles.	Price of each.	Names at 80c. each.	Names at 100c. each.
2—Clothes Wringer, No. 2	\$1.50	15	12
3—Clothes Wringer, No. 1	\$1.00	22	18
4—Sewing Machine, (Wheeler & Wilson)	\$45.00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	\$35.00	69	96
6—Aneroid Barometer	\$7.50	19	44
7—Hydropult	\$12.00	30	48
8—Five Octave Melodeon (best)	\$75.00	125	237
9—4½ Octave Melodeon (best)	\$60.00	164	182
10—Four Octave Melodeon (best)	\$45.00	90	130
11—New Cyclopaedia, 16 volumes	\$48.00	96	140
12—Worcester's Unabridged Dictionary	\$7.50	17	40
13—Five back Volumes <i>Agriculturist</i> , 1857-61	\$5.00	16	30
14—Four do do do do	\$4.48	18	26
15—Three do do do do	\$3.36	10	20
16—Two do do do do	\$2.24	15	15
17—One do do do do	\$1.12	10	10
18—Windsor & Newton's Paints	\$2.50	20	20
19—Osborn & Hodgkinson's Paints	\$1.50	15	15
20—Hand Corn Sheller (best)	\$6.50	21	40
21—Saw and Hay Cutter (best)	\$8.00	24	48
22—Best Subsoil Plow (2-horse)	\$8.00	24	48
23—Various Books—See terms below			

DESCRIPTION OF THE PREMIUMS.

Premiums. 2, 3.—Wringer Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it over a year with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibres of the clothes, but simply presses them between two elastic India-rubber rollers, which are moved by a crank, and whether large or small pieces, they come out drier than when wrung by hand. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—They are of three sizes.—No. 2, costing \$7.50, is just the thing for common family use. This we present to any one sending us 18 subscribers for the *Agriculturist*, at \$1 each, (or 37 at the lowest club price of 80 cents.)—No. 3, costing \$5, is thrown out for reasons given on page 348. No. 2 is preferable.—No. 1, costing \$10, is adapted to larger families and Hotels. We will present it for 23 subscribers at \$1 each, (or 48 at 80 cts. each.)—We are glad to be able to present this implement as a premium on such liberal terms. One or more clubs for a No. 2 might be made up in almost every neighborhood.

Premium No. 4—Sewing Machine.

90 Subscribers at \$1 each, (or 130 at 80 cents each,) will entitle the person sending them to Wheeler & Wilson's best \$45 Sewing Machine, (including Hemmer), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly four years' use in our own family, in connection with other machines. We want no better.—The prolongation of life, the saving of health and strength to our families, and the better physical vigor thus secured to the next generation, render the Sewing Machine one of the most desirable additions to the household.—The machines will be selected

new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium No. 5—Sewing Machine.

69 Subscribers at \$1 each, (or 98 at 80 cents each,) will entitle the person procuring them to Wilcox & Gibbs' \$35 Sewing Machine, including a set of Hemmers. This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is \$30, but we have included in our offer \$5 extra for the set of Hemmers, because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium No. 6—Barometer.

19 Subscribers at \$1 each, (or 44 at 80 cents each,) will entitle the person getting up the club to one of Kendall's Aneroid Barometers, (Price \$7.50.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly two years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. Each instrument is packed in a neat leather case, 6 inches square, and 4 inches deep, and this, surrounded by cotton, is enclosed in a wooden box, ready to be carried anywhere by express or otherwise.

Premium No. 7—Hydropult.

30 Subscribers at \$1 each, (or 48 at 80 cts. each,) will entitle the person making up the club to the Hydropult, (Price \$12,) a very useful hand implement for carrying instantly to any desired point, to throw water from a pail, tub, cistern, or other receptacle, for extinguishing fires, watering plants, washing carriages, etc., etc. A stream can be thrown up to the third story windows. It is supplied with jet pipe and rose or sprinkler; is made of brass, and is durable. It weighs only 8 lbs., and can be packed in small compass to go by express or otherwise.

Premium No. 8—Melodeon.

125 Subscribers at \$1 each, (or 237 at 80 cents each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$75 Melodeons (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

The above premium list may be made up by the members of a congregation, or Sabbath School, or other school, and an instrument thus secured for a church or school-room. This was done in several instances the past year.

Premium No. 9—Melodeon.

104 Subscribers at \$1 each, (or 182 at 80 cents each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$60 Melodeons (4½ octaves.) See No. 8.

Premium No. 10—Melodeon.

90 Subscribers at \$1 each, (or 130 at 80 cents each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$45 Melodeons (4 octaves.) See remarks above. N. B.—Higher priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopaedia.

96 Subscribers at \$1 each, (or 140 at 80 cents each,) will entitle the person getting up the club to a set of Appleton's New American Cyclopaedia, now in course of publication, consisting of sixteen large volumes of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Twelve volumes are now ready, and the remaining four will be furnished as fast as issued. The original design of this work was 15 volumes, but it is found that the immense mass of matter will require 16 large volumes. The work is sold at \$3 per volume, or \$48 for the set. To no better purpose could any one devote the coming Fall and Winter evenings than to raising the club of subscribers required to secure this most valuable work for himself and family.

Premium No. 12—Best Dictionary.

18 Subscribers at \$1 each, (or 40 at 80 cts. each,) will entitle the person getting up the club to a copy of the large Pictorial Unabridged Edition of Worcester's Dictionary, (Price \$7.50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly 10 lbs.; is 12 inches long, 10 inches wide, nearly 4 inches thick, and contains 1854 pages of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopaedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country. The United States Express Company have kindly agreed to deliver the book at very moderate rates to any part of the country within their lines extend. It can also go by mail to any place within 3,000 miles for \$1.00, prepaid postage. Except to remote points, the expense will be much less by Express. (Persons living off from express lines, can usually have it delivered to some person on the line, and send for it at their convenience.)

Premiums Nos. 13 to 17—Back Volumes.

These premiums (13 to 17) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, and 20, and of the German Volumes 18, 19, and 20. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded post-paid. The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For 16 Subscribers at \$1 each, (or 30 at 80 cents each), we will present five volumes.—For 13 Subscribers at \$1 each, or 26 at 80 cents each, four volumes.—For 10 Subscribers at \$1 each, or 20 at 80 cents each, three volumes.—For 15 Subscribers at 80 cents each, two volumes.—For 10 Subscribers at 80 cents each, one volume.—Let every one selecting these premiums be careful to name just which back volumes are desired.

Premium No. 18—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Winsor & Newton's Water Color Paints*, consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where within 3000 miles. (If to go to the British Provinces or to the Pacific Coast, the recipient will need to send 84 cents for extra postage above the 6 cents per ounce which we pay.)

Premium No. 19—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's Water Color Paints*, consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, \$1.05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium No. 20—Corn Sheller.

21 Subscribers at \$1 each, (or 40 at 80 cents each,) will entitle the person getting up the club to one of the best *50% Hand Corn Shellers*. This is a convenient, useful implement, very frequently called for. We give the best implemented to be obtained for the price.

Premium No. 21—Hay Cutter.

24 Subscribers at \$1 each, (or 48 at 80 cents each,) will entitle the person getting up the club to one of the best *50 Straw and Hay Cutters*. This is a useful implement, needed wherever horses and cows are kept.

Premium No. 22—Subsoil Plow.

24 Subscribers at \$1 each, (or 48 at 80 cents each,) will entitle the person getting up the club to the best *50 Subsoil Plow* (two-horse), a very desirable implement.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of 16 or more names may choose any desired Books from the list advertised on page 351, to the amount of 12½ cents for each name forwarded at 80 cents, (or 3½ cents for each name sent at \$1.) and the books will be delivered to the recipient free of all expense for postage. Persons making up a club for any of the preceding premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Friday Morning, Oct. 18, 1861.

* The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who, throughout the year, spends the whole of each day in the markets, watching the transactions and collecting information, and we flatter ourselves that this report is one of the most correct anywhere published.

CURRENT WHOLESALE PRICES.

	Sept. 19.	Oct. 18.
Flour—Super to Extra State	\$4 75 @ 5 45	\$5 30 @ 5 8
Superfine Western	4 70 @ 4 90	5 30 @ 5 40
Extra Western	5 10 @ 5 25	5 50 @ 5 60
Fancy to Extra Genesee	5 35 @ 5 75	5 85 @ 7 00
Super to Extra Southern	5 20 @ 5 50	6 00 @ 6 25
RYE FLOUR—Fine and Super	2 25 @ 3 50	2 75 @ 4 00
CORN MEAL	2 75 @ 3 50	2 75 @ 3 24
WHEAT—Canada White	1 20 @ 1 35	1 38 @ 1 45
Western White	1 30 @ 1 35	1 38 @ 1 45
Southern White	1 20 @ 1 31	1 40 @ 1 48
All kinds of Red	95 @ 1 30	1 15 @ 1 36
CORN—Yellow	55 @ 56	62 @ 64
Mixed	50 @ 56	57 @ 61
OATS—Western	33 @ 35	36 @ 39
State	34 @ 35	38 @ 39
RYE	65 @ 70	72 @ 78
BARLEY	65 @ 75	60 @ 70
HAY, in bales, per 100 lbs	60 @ 75	45 @ 72
COTTON—Middling, per lb.	21½ @ 22	21¼ @ 22
RICE, per 100 lbs	6 25 @ 7 00	7 00 @ 7 50
HOPS, crop of 1861, per lb.	18 @ 24	15 @ 22
FEATHERS, Live Geese, p. lb.	30 @ 35	32 @ 35
SEED—Clover, per lb.	8¼ @ 8½	8 @ 9
Timothy, per bushel	2 60 @ 2 87½	1 75 @ 2 00
SUGAR—Brown, per lb.	5¼ @ 5	5¼ @ 5½
MOLASSES, New-Orleans, p. gal.	50 @ 55	50 @ 55
COFFEE, Rio, per lb.	13¼ @ 15½	14½ @ 15
TORACCO—Kentucky, &c, p. lb.	6 @ 15	8 @ 15
Seed Leaf, per lb.	5 @ 20	5 @ 20
Wool—Domestic fleece, p. lb.	28 @ 40	28 @ 32
Domestic, pulled, per lb.	27½ @ 37½	32 @ 42
TALLOW, per lb.	8 @ 8½	8¼ @ 9
OIL CAKE, per ton	30 00 @ 38 00	31 00 @ 38 00
PORK—New Mess, per bbl.	14 50 @ 15 00	14 75 @ 15 50
Prime, new, per bbl.	9 75 @ 10 00	9 75 @ 10 00
BEEF—Repacked mess	9 75 @ 11 50	9 25 @ 11 00

LARD, in bbls, per lb	8 @ 9¼	8½ @ 9½
BUTTER—Western, per lb.	8 @ 11	8 @ 11
State, per lb.	8¼ @ 14	11 @ 15
CHEESE	5 @ 7	5 @ 7
EGGS—Fresh, per dozen	12 @ 12½	14 @ 16
POULTRY—Fowls, per lb.	9 @ 10	7 @ 8
Chickens, per pair	21 @ 20	18 @ 18
Geese, per pair	1 25 @ 1 50	1 25 @ 1 50
Ducks, per pair	38 @ 50	44 @ 56
Turkeys, per lb.	9 @ 10	11 @ 12
Woodcock, per pair	50 @ 62	50 @ 60
Partridges, per pair	50 @ 62	50 @ 56
Dried Apples, per lb.	4¼ @ 5	5 @ 6¼
Dried Peaches, per lb., peeled	10 @ 12	10 @ 12
Dried Cherries, platted, per lb.	10 @ 11	14 @ 15
Dried Raspberries, per lb.	11 @ 12	12 @ 13
POTATOES—Mercury, p. bbl.	1 50 @ 2 00	1 50 @ 2 00
Peachblow, s. per bbl.	1 50 @ 1 75	1 25 @ 1 50
Sweet Delaware, per bbl.	3 00 @ 3 50	2 00 @ 2 50
ONIONS—Red, per bbl.	1 00 @ 1 25	1 00 @ 1 25
White, per bbl.	1 25 @ 1 75	1 25 @ 1 75
TURNIPS—Rutabaga, per bbl.	75 @ 1 00	75 @ 1 00
SQUASH—Marrow, per bbl.	62 @ 1 00	62 @ 1 00
TOMATOES, per bushel	25 @ 37	25 @ 32
APPLES—Common, per bbl.	1 50 @ 2 00	1 25 @ 1 50
Apples—good, per bbl.	2 00 @ 3 00	2 00 @ 2 50
GRAPE—Isabella, per lb.	6 @ 10	6 @ 10
QUINCES—per bbl.	8 00 @ 6 00	8 00 @ 6 00
CRANBERRIES—per bbl.	5 00 @ 6 00	5 00 @ 6 00
CHESNUTS—per bushel	2 00 @ 2 25	2 00 @ 2 25
HICKORY NUTS—per bushel	1 00 @ 1 25	1 00 @ 1 25

The following table shows at a glance the aggregate amount of business transacted in the New-York Markets since the date of our last report, and also a comparison with the previous month.

TRANSACTIONS AT THE NEW-YORK MARKETS.					
RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.
25 days this month	539,000	3,617,000	3,812,000	74,100	158,800
27 days last month	479,000	3,401,000	3,605,000	45,925	65,925
27 days last month	538,312	3,473,125	4,430,250	47,187	6,300
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
25 days this month	616,000	6,280,000	4,708,000	115,950	136,000
27 days last month	538,312	3,473,125	4,430,250	47,187	6,300

It will be seen that the above actual figures are for 25 days only—one day being deducted for the National Fast, and one for the earlier date of this month's report. If for comparison we estimate for two days more, the figures will stand thus:

RECEIPTS.					
Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
This month	532,120	3,906,360	4,116,960	80,028	171,504
Last month	479,000	3,401,000	3,605,000	45,925	65,925
Increase	103,120	505,360	511,960	34,103	105,579
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
This month	668,280	6,792,130	5,094,640	123,223	146,580
Last month	538,312	3,473,125	4,430,250	47,187	6,300
Increase	131,468	3,318,985	654,390	76,036	140,280

Exports of Breadstuffs from New-York, Jan. 1, to Oct. 16.

	1860.	1861.
Wheat Flour, bbls.	1,340,981	2,121,403
Rye Flour, bbls.	6,999	9,345
Corn Meal, bbls.	75,063	90,200
Wheat, bushels.	8,109,018	18,642,887
Corn, bushels.	2,170,894	9,280,595
Rye, bushels.	450	501,795
Barley, bushels.	8,280	1,000
Oats, bushels.	102,508	147,734
Peas, bushels.	—	103,151

The above tables are both interesting and important. We see that, large as were the transactions reported a month ago, they have been of still greater magnitude during the month ending to-day. The increase in receipts and sales have been from 12 to 25 per cent., the average daily receipts and sales of Flour and Wheat being just about 20 per cent. greater than for the preceding month. These sales, it will be understood, have been mainly for export to foreign markets. Nor is this all. A glance at the table of prices above, shows that the prices of shipping brands of Flour have gone up 60c. per barrel, on the average; Sound Wheat is 7c. to 12c. per bushel higher; and Corn has advanced 4c. to 8c. per bushel. Elsewhere (pages 327-8) we have discoursed at length upon the Breadstuff market, and we need only add here that the enormous, unprecedented sales and exports of our soil products are exerting an immense influence upon the commercial condition and political welfare of the country. Ordinarily, the loss of a cotton crop to the commerce of the country would be disastrous. The effect of such a loss is this year counterbalanced by the fact that we alone, of all the nations of the earth, have an abundant surplus of food, which is all needed elsewhere. In fact, we absolutely control the Breadstuff markets of the world. Our ability to meet the demand upon us from abroad, is only limited by the capacity of our canals and railroads to bring forward produce to the sea-board. So greatly has the demand exceeded the receipts, that large quantities of Wheat and Flour have been sold in advance, and most of the Flour, Wheat and Corn thus sold is not reported on arrival, but goes directly to ships or storehouses; so that our reported receipts are really below the actual receipts. Again, in ordinary years speculators buy and hold stocks, and sometimes the same lots of Flour and Grain are bought and sold many times over on speculation, so that the monthly aggregate of sales does not show the actual amount of produce in transit. This year the wants of exporters are so urgent that stocks are seldom detained to be banded about by speculators, and the sales show pretty nearly the actual amount going into consumption or to foreign countries. Since Jan. 1, the known receipts in this City aggregate 3,300,000 bushels of Wheat Flour; 18,000,000 bushels of Wheat; 17,000,000 bushels of Corn; 400,000 bushels of

Rye; 1,000,000 bushels Barley; and 2,600,000 bushels of Oats. Reckoning the Flour as Wheat, the total grain receipts at this port for 9½ months just past, aggregate 55,500,000 bushels, against 39,000,000 bushels for same period last year. Of this, the Flour and Wheat receipts this year aggregate 34,500,000 bushels of Wheat. The total export from this port since January 1, of Flour, Wheat, Corn, Rye, Barley and Oats, equal 40,000,000 bushels, against 16,000,000 to same date last year—an excess this year of 24,000,000 bushels, or an increase of 150 per cent!—P. S.—Just as we are going to press we receive from Europe, confirmation of what we have above, and elsewhere, stated in regard to the deficiency of the Wheat crop in France. The money market of Paris is greatly disturbed by the increasing prospect of the large loss of coin, to be sent abroad for food; while the higher price of Flour already experienced gives rise to fears of a recurrence of "bread riots." The economy inaugurated in the United States has so far diminished the importation of silks, that in Lyons, the great silk mart of France, and even of Europe, there is already a great amount of destitution. Wool is just now attracting more attention than even Cotton, in our own market. A month ago we advised our readers that a large, well-paid, well-clothed army would create a ready demand and high rates for all the wool in the country. The subsequent course of transactions has more than confirmed our predictions, which, as usual, were based upon well-considered facts. Common and medium grades, or "Domestic Fleece," have advanced within one month from 28c. to 40c. per lb. to 38c. to 52c.—fully one-third—and there is a large unsupplied demand. Sheep have increased in price, from the increased value of the wool to be pulled from their pelts. The woolen factories throughout the country are running night and day, and large orders have been going abroad, even under the new tariff. The extra fine qualities of wool, not being so well adapted for army clothes and blankets, have not risen as fast as the lower grades. The activity in the Breadstuff and Wool Markets, and the large distribution of money, gold and government issues—have favorably affected all branches of trade connected with agriculture. The table of current prices, above show the changes in prices at a glance.

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been very largely supplied during the past month. Receipts were: Sept. 24th, 5,102; Oct. 1st, 4,774; Oct. 8th, 5,902—the largest this year. Oct. 15th, 5,991—an average of 5,224 per week for the past month, and an increase of 800 per week over the previous month. Prices fell ¼c. the first week; stationary at the next market; fell ¼c. the next week, where they still remain, viz.: 8½c. to 8¼c. per lb., estimated dressed weight, for prime cattle; 7c. to 8c. for medium to good; and 5c. to 6c. per lb. for lower grades. Average of all sales 7c., or ¼c. less than for the same period last year. Between butchers and graziers, the cattle were all bought up at each market.

VEAL CALVES.—Receipts are moderate, and prices are gradually advancing. For the past month the average has been 608 per week, all of which were readily sold at 4¼c. to 5¼c. per lb., live weight, the prices remaining nearly uniform since our last report.

SHEEP AND LAMBS.—Sell briskly at an advance of fully ¼c. per lb., live weight. Receipts have averaged 13,610 per week, or 450 per week less than last month. There is a demand for store ewes, but prices are higher than graziers are willing to pay. Good fat Sheep are worth 4¼c. to 4½c. per lb., live weight, a few extras have sold for 4¾c. to 5c., or \$3.25 per head. Common stock sells at 3¼c. to 3½c. per lb. Lambs are worth 4c. to 5c. One cause of the advance in Sheep is the higher price of wool.

LIVE HOGS are coming in much slower than this time last month, the receipts being but 8,994 per week, or 1,500 less than the weekly average one year ago, and prices are now 2c. per lb. lower than then, or about as last month. The stock has all been sold, but it is evident that prices must continue to rule low. Live hogs are now worth 4¼c. to 4½c. for corn fed, and 3¼c. to 3½c. for still fed hogs.

The Weather. since our last report, has been remarkably mild, with just rain enough for Fall grain and grass. There has been no frost in this vicinity as yet, which is an uncommon occurrence. Our DAILY WEATHER NOTES, condensed, read: September 20, clear and fine—21, cloudy, light rain at night—22, 23, clear, cool—24 to 26, fine, warm, sunny weather—27, cloudy A. M., moderate rain P. M. and at night, with high winds—the rain was very heavy in Western New-York, carrying away numerous bridges on the Erie railroad—28 to 30, and October 1 to 6, delightful, warm autumn weather—6 and 7, cloudy, with showers P. M. and at night—8, rainy day—9, clear, cool—10, 11, cloudy, with rainy nights—12, clear, cool—13, cool, with light showers—14 to 16—fine, clear days—17, cloudy, barometer falling—18, very heavy rain at daybreak.

The rain from Sept. 15 to Oct. 15, measured 3.22 inches—scarcely differing from the previous month.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit).—+ indicates rain,—, snow.]

SEPTEMBER.											
1.....55°	7.....50	13.....60	19.....61	25.....52							
2.....57	8.....62	14.....60	20.....64	26.....54							
3.....64	9.....60	15.....64	21.....64	27.....57							
4.....67	10.....57	16.....66	22.....62	28.....60							
5.....57	11.....66	17.....63	23.....30	29.....50							
6.....62	12.....62	18.....59	24.....34	30.....49							
Average.....59°											
OCTOBER.											
1.....52°	4.....56	7.....70	10.....58	13.....58							
2.....54	5.....64	8.....62	11.....61	14.....47							
3.....63	6.....67	9.....49	12.....61	15.....53							

MAP OF KENTUCKY AND PART OF TENNESSEE.

Engraved expressly for the American Agriculturist.



Exhibition Tables at the Office of the American Agriculturist.

The following articles, not before noticed, have been placed on our tables for exhibition, during the past month.

VEGETABLES, ETC.—*Potatoes*. Peach Blows, large and fine, shown by Michael Foley, North Islip, N. Y. Potato of curious growth through a knot-hole by G. E. Hance, Essex Co., N. J. Chinese potatoes, (Dioscorea) by G. W. Usher, Richmond Co. N. Y. Sweet potatoes, large and fine, raised by J. Leonard, exhibited by Joshua A. Perry, Queens Co., N. Y.; also excellent specimens from the proprietor's grounds at Flushing. *Tomatoes*. Cuban, and Greenwich Apple Tomatoes, a new yellow variety, very fine, by W. S. Carpenter, N. Y. Cuban by G. M. Usher, Richmond Co., N. Y. Perfected, or Fejee Island, beautiful specimens by O. Judd, Flushing, and H. P. Sanford, Westchester Co., N. Y. *Miscellaneous*: White Cranberry Beans, by Geo. A. Elston, Chester Co., Pa. Gherkins and Okra, by O. Judd, Flushing, N. Y. White Egg Plant, large and finely shaped, said to surpass the purple variety in flavor, by C. E. Davis, Litchfield Co., Conn. Mammoth Squashes, weighing respectively 138 lbs. and 113 lbs., by J. A. Valentine of Farmers' Club at Cien Cove, L. I. Yellow Peppers, by S. C. Lotridge, N. Y. Kentucky Sweet Potato Squash, by J. W. Jones, Chatham 4 Corners, N. Y. Turnips, Mangel Wurzel, Artichokes, and curled Endive, by O. Judd, Flushing, N. Y. Fancy Gourds, by T. F. Stewart Flushing, N. Y. Apple Pie Melon, and Cheese Pumpkins, very large, by S. B. Conover, Washington Market, N. Y. Honolulu Squash, a splendid specimen, weighing 37 lbs., by G. M. Usher, Richmond Co.; N. Y. Yard beans, pods 3 feet long, by O. Judd, Flushing, N. Y. Spinach, very fine growth, by G. M. Usher, Richmond Co., N. Y. Blue Stem Wheat, superior sample, by J. S. Underhill, Suffolk Co., N. Y. King Phillip Corn, by Rev. W. W. Howard, Queens Co., N. Y. Egyptian Wheat, by M. P. Walker, Suffolk Co. N. Y. Red and White Rice Corn, very pretty, by J. Brush, Putnam Co., N. Y. Gall nuts from the oak, singular growth, John J. Walker, Westchester Co., N. Y. "Apple of Paradise," a species of lemon from Italy, by Jacob Marcus, N. Y. Chestnuts fine samples, by E. S. Lamoreux, Somerset Co., N. J., and Mrs. Fanshaw, Yorkville, N. Y.

FRUITS.—*Grapes*. Superb specimens of the Delaware, by H. B. Mace, Orange Co. N. Y. Delaware and Concord, fine clusters, by J. C. Remson, Orange Co. N. J. A small Delaware vine, 3½ feet high, containing 22 fine clusters of fruit, by Wm. Perry & Son, Bridgeport, Conn. Clinton, Catawba, and Isabella, by S. B. Conover, Washington Market N. Y. Concord, by W. S. Carpenter and A. P. Cummings, N. Y. Isabella, fine specimen, John Cole, Richmond Co., N. Y. Catawba and Isabella, by Dr. R. T. Underhill, Westchester County, N. Y. Catawba, beautiful cluster, by J. H. Gibson, Monmouth Co., N. J. A variety of white grapes, fine bunches of good flavor, Isaac Merritt, Dutchess Co., N. Y. Isabella, of extraordinary size, by H. Fordham, Suffolk Co., N. Y. Catawba, by W. B. Westcott, N. Y. Diana, five fine clusters, from a vine, planted in April, O. Judd, Flushing N. Y. Isabella Grapes, the finest specimens shown here this season, and remarkable at any time. Three clusters on a cane seven inches in length, weighed 3 lbs. 8 oz. The berries were very large and of luscious sweetness, by A. E. Beard, Litchfield Co., Conn. *Pears*. 50 named varieties by Ellwanger & Barry, Rochester, N. Y. 23 named varieties; also, 8 Beurre Clairgeaus, weighing 6½ lbs. on a branch 9 inches long, a year-old graft, by W. S. Carpenter, N. Y. Bartlett, 6 from a 1-year-old graft, by P. L. Bogert, Queens Co., N. Y. Unnamed variety, J. W. Everts, Queens Co., N. Y. Seven specimens, by C. Williams, Essex Co., N. J. Pound pears, by H. and J. Storms, N. Y. Vicar of Winkfield and native seedlings, by A. M. Halstead, Westchester Co., N. Y. Pound Pears, two specimens, weighing 1 pound 4 ounces and 1 pound 3 ounces, by Mr. Eddy, Kings Co., N. Y. *Apples*: 35 named varieties, by W. S. Carpenter, N. Y. 15 named varieties, by Ellwanger & Barry, Rochester, N. Y. Large apple grown in a small necked bottle, curious, by Mr. Thorp, Flushing N. Y. Gloria Mundi, fine specimens, by Mr. Wilden, Morrisania N. Y. Fall Pippin, very fine, by George Searing, Queens Co. N. Y. Apple Quince of very large size, weighing 18 oz. by Hiram Gilbert, Essex Co., N. Y.

FLOWERS, ETC.—Prize Dahlias, a magnificent collection to some of which a premium was awarded by the Brooklyn Horticultural Society, exhibited by C. S. Pell, Supt. N. Y. Orphan Asylum. Tubers of these varieties are for sale by Mr. Pell, at \$2 per doz., for the benefit of the Asylum. Double Zinnias, by John H. Haviland, N. Y. and W. S. Carpenter, N. Y. Cut flowers, a fine collection of Asters in variety, Verbenas, Phloxes, Marigold, Zinnias, Coxcomb, etc., by O. Judd, Flushing, N. Y. Cut blooms of new Crimson Scabious, by B. S. Olmstead

Westchester Co., N. Y., who will please accept our thanks for seed of the Scabious, and of the Japan Pink. Castor Oil Plant, by O. Judd, Flushing, N. Y. Tuberoses and sweet scented Geraniums, very fine, by A. P. Cummings, N. Y. Cut flowers, a beautiful bouquet by G. M. Usher, Richmond Co., N. Y. Dahlias and Double Marygolds, very fine, by W. S. Carpenter, N. Y. Dahlias, by J. E. Keeler, Queens Co., N. Y.

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Beyond all doubt or controversy, the circulation of the American Agriculturist to regular subscribers, is many thousands greater than that of any other Agricultural or Horticultural Journal in the World, no matter what its character, or time or place of issue. The publisher is ready at any and all times to substantiate this statement.

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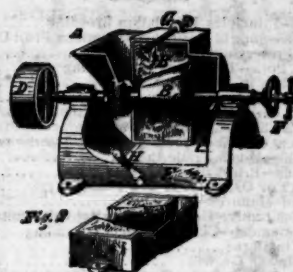
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This November Number of the *Agriculturist* is, we think, the most valuable one we have ever issued. Including the condensed, but mainly valuable contents of the *Basket*, there are in this single number **One Hundred and Fifty-six different Articles**, without reckoning separately 33 methods of cooking Indian Corn, or the numerous hints on different topics in the *Calendar of Operations*. Can any one read through a single such number, without getting one or more hints or suggestions, that will in some way, in the long run, be worth more than a dollar? It is not always, indeed, that we remember the origin of a particular train of reasoning, or course of action; our minds are filled with thoughts and plans, originating we scarcely know when, or how. Let any one who has read this journal for a year or two, inquire just what would have been his present knowledge and way of thinking, had he been entirely without the paper.

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